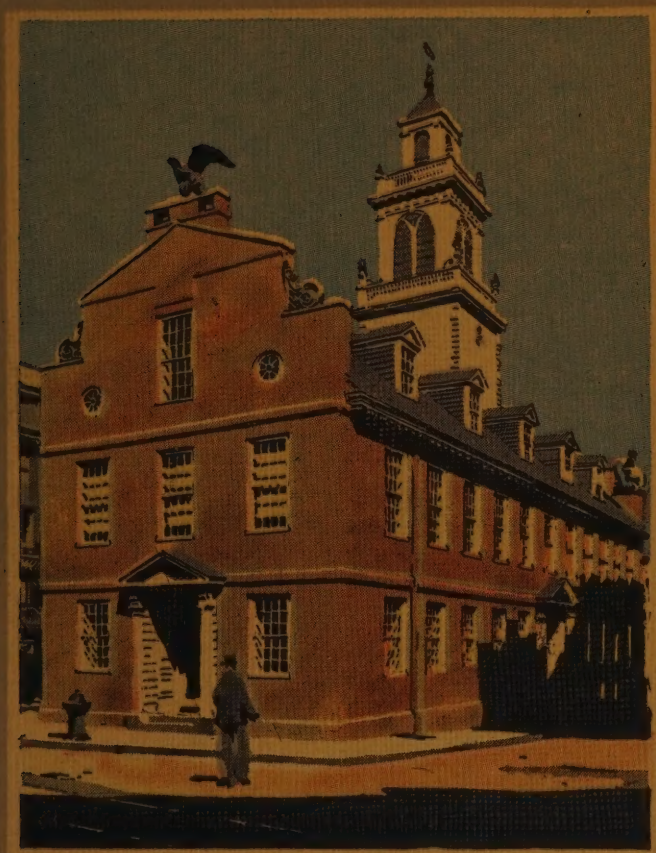


per  
NA  
1  
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*New York City  
houses.*

# THE ARCHITECTURAL FORUM



## AUGUST 1924



QUALITY LEAVES



ITS IMPRINT

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# NATCO BULLETIN

## 171

### *More Light On an Important Subject*

**FOR** the purpose of making your hollow tile data more complete, Bulletin 171 on Natco Standard Fire Proofing has been re-edited, extended and reprinted and is now at your service.

This new issue contains complete, up-to-date information and specifications as approved by engineers and architects for the installation of Natco Hollow Tile Floors, Interior and Exterior Walls, Girder Coverings and similar construction as used for steel structure buildings of all kinds.

It will be a practical, authoritative and useful addition to your files. A post card or copy of your letterhead will bring a copy to you by return mail.

Natco Bulletin 174 on Natco Wall Construction and our bulletin on Natco Header Backer Tile will also be mailed free at your request.

**NATIONAL FIRE PROOFING COMPANY**  
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# NATCO

# HOLLOW TILE

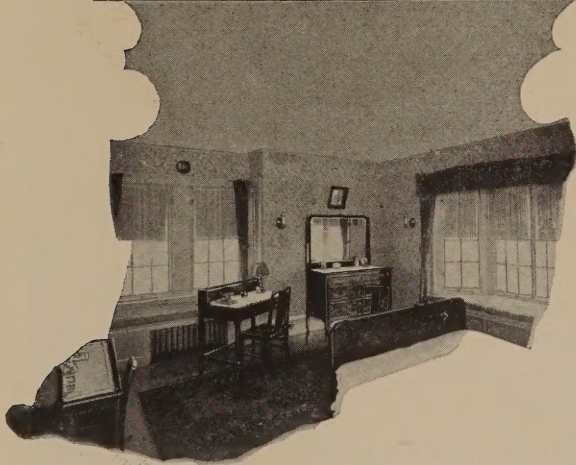
Volume XLI

THE ARCHITECTURAL FORUM

Number 2

Published Monthly by Rogers and Manson Company, 383 Madison Avenue, New York, N. Y. Yearly Subscription: U. S. A., Insular Possessions and Cuba, \$6. Canada, \$6.75. Foreign Countries in the Postal Union, \$7.50. Single copies, 60 cents. Entered as Second Class Matter at the Post Office, New York, N. Y., under the Act of March 3, 1879.





*Upper View shows new home equipped with Truscon Steel Casement and Steel Basement Windows*

*Truscon A-Metal Lath insuring permanent smooth plaster surfaces used in interiors shown.*

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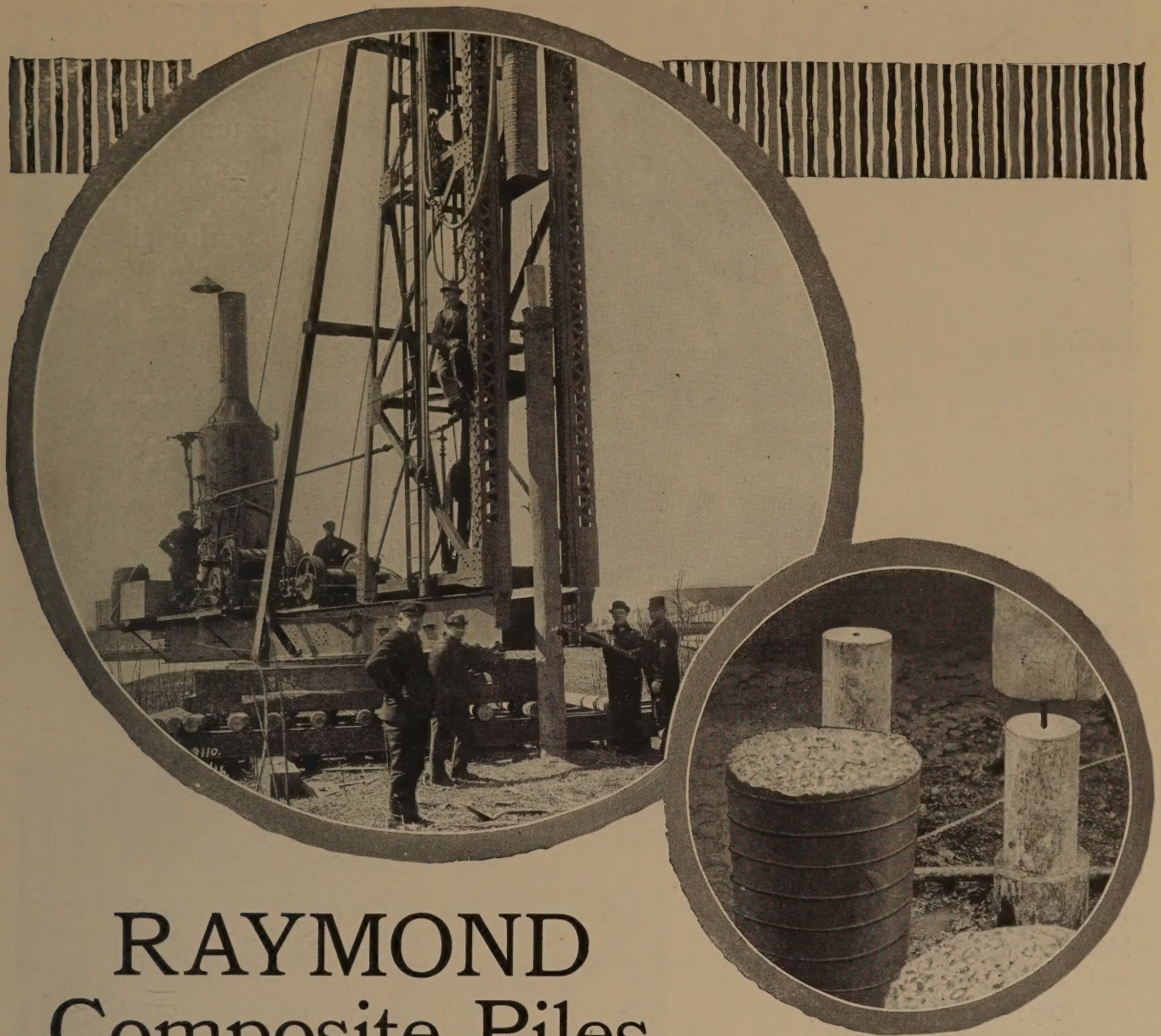
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mean the lowest cost per foot where piles must be unusually long. The joint means perfect pile alignment and maximum strength. Nearly the full strength of the wood section is developed and the concrete column section is bonded to it clear to the top

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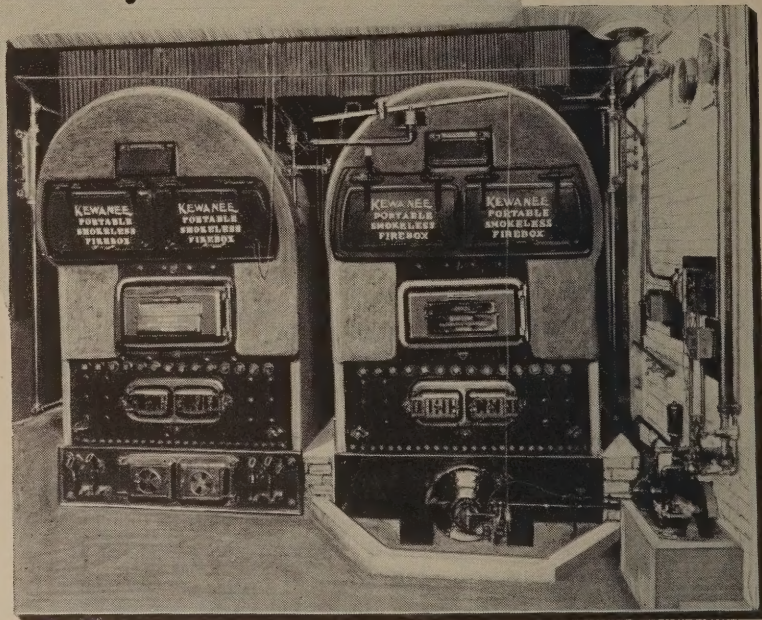


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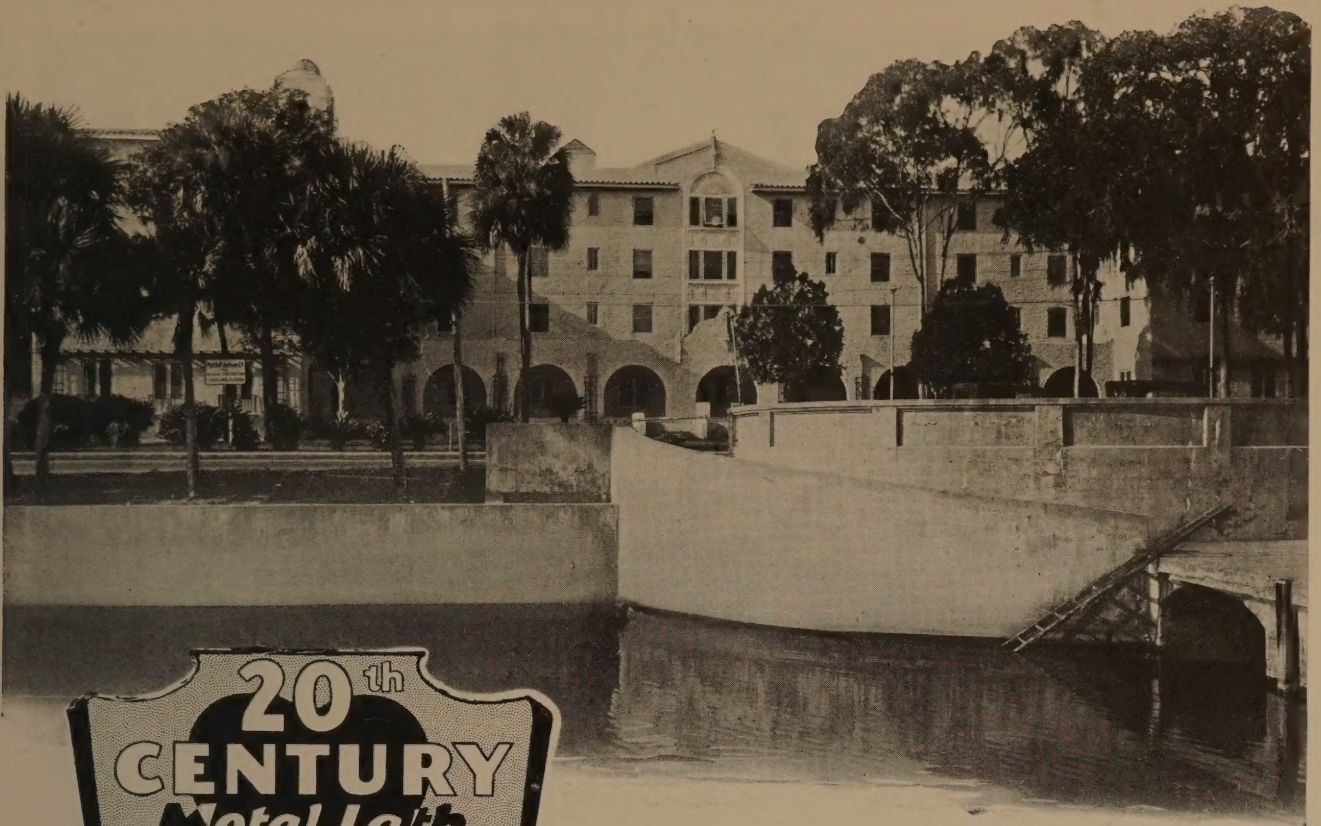
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THE warm, salt laden, moist Florida climate so favoring atmospheric corrosion made it desirable to use 20th Century Lath in the beautiful new Indian River Hotel at Rockledge, Florida. Arch. Richard W. Rummell, Cocoa, Florida.

## That Magic Touch of Copper—

**S**TEEL—most essential of metals—has its Nemesis—*rust*.

Science, however, is now able to combat this age-old enemy. By the addition of a small percentage of copper, steel can be made to develop so high a resistance to atmospheric corrosion that its utility is vastly multiplied.

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### COPPER STEEL LATH

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20th CENTURY Lath is indicated as a base and reinforcing for exterior or interior plastering work in warm, damp climates, by the ocean, in manufacturing districts, etc. Moreover, it's a very small meshed, perfect keying lath very economical of plaster. Shall we send your specification writer samples, specifications and the Am. Soc. of Testing Materials' reports covering six years' tests of coppered steel?

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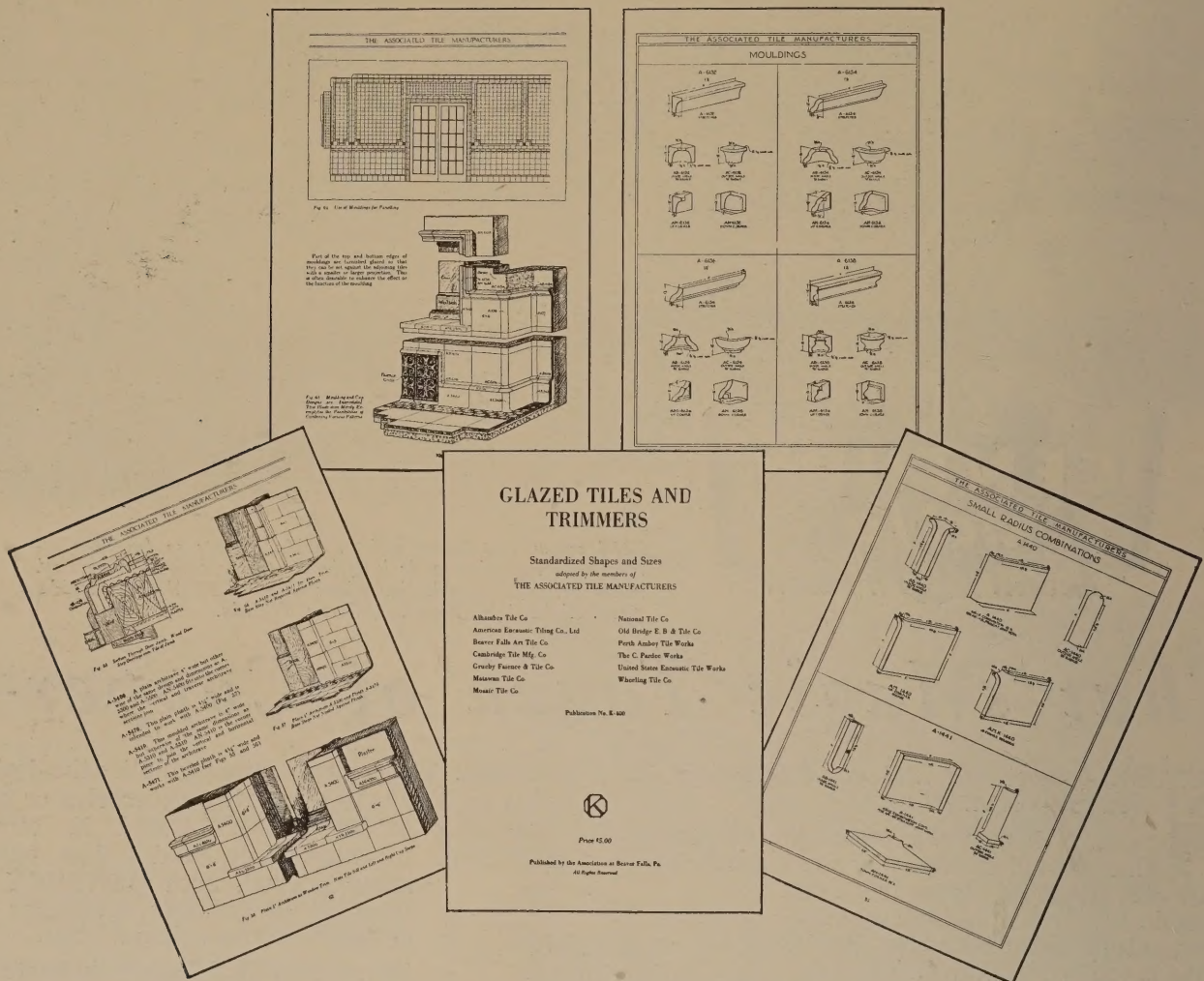
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20th CENTURY Metal Lath



## Sample Pages

# A Handbook on Tiles



"GLAZED TILES AND TRIMMERS," a new handbook on Tiles published by the Associated Tile Manufacturers as Publication No. K-400, is now ready for architects and members of their staffs.

This is the latest of the well known "K" series. It contains the results of years of co-operative work on the part of Tile manufacturers, architects, and Tile contractors.

It will give valuable service in any drafting room, and prove helpful in the preparation of specifications. In the use of this handbook it is possible to specify Tiles

by pattern numbers, which are applicable to the product of the various Tile manufacturers.

Each Tile shape is shown in dimensioned detail. The information in the book is complete. Selection is made easy and convenient by means of index sheets. Typical uses of the various shapes are shown in numerous application sketches.

Please send requests for this handbook on your stationery, addressing the Associated Tile Manufacturers, Beaver Falls, Pa.

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EGLISE DE LA NATIVITE D'HOCHELAGA, MONTREAL, P. Q.

Viau & Venne, *Architects*

Monseigneur, G. M. LePailleur, *Patre-Curé*

Domed (3) ceiling construction forming the roof of the Church. Soffit course in varied shapes and colors of AKOUSTOLITH sound absorbing tiles. Wall facing with AKOUSTOLITH wall blocks, 15" x 30".

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Detail of entrance and lower stories, the Belden Hotel, Belden Ave. and Lincoln Park West, Chicago, Illinois; Fridstein & Company, Engineers.

The trim above the granite base for the two fronts and court of this thirteen-story building is Northwestern mottled glazed terra cotta in a warm grey tone, with spandrels of the second story in dark green, and mansard roof in mottled purple with a special rough texture.

In the lobby, set in a niche lined with bright gold, above a pool of water, is a statue of the Mesopotamian Princess Kirghipa, executed in our luster black ceramic finish and bearing in Egyptian hieroglyphics the story of her ancient glory.

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**CHICAGO**



# SIMPLEX BOILERS

Residence of B. C. Spitzley,  
Detroit, Michigan. Heated  
by a Simplex Steel Boiler.  
R. L. Spitzley, heating con-  
tractor.



HOUSEMAN - SPITZLEY

REAL ESTATE  
RENTALS - BUILDING

DETROIT  
MICHIGAN

May 27th,

Mr. J. R. Furth,  
C/o Heggie Simplex  
2026 E. 22nd St.,  
Cleveland, Ohio.

Dear Sir:

I am pleased to report to you as follows concerning the Simplex Steel Boiler which I had installed in my home at 1048 Yorkshire Road, Grosse Pointe Park, early in the fall of 1923.

As you know, I removed both the boiler and oil burner which I had been using up to that time and replaced them with a Simplex Steel Boiler and a new Universal Oil Burner. I made no other changes, either in the vapor system or piping. Consequently it gives me great satisfaction to report the results of this change, for I saved \$250.00 in my fuel bill alone during the past winter.

This, together with the additional comfort and lack of any annoyance whatever, is indeed very satisfactory.

Very truly yours,

BGS-Z

## Saves \$250 in Season

—and the satisfaction Mr. Spitzley mentions (letter at left) is typical of that which is enjoyed by Simplex owners.

Simplex Steel Boilers burn any fuel—smokelessly—saving 25% to 40% in consumption—and their efficient service is a continuous source of comfort and satisfaction. Built of steel—to last. Simple—to install, operate and clean. Compact—saving space. Fully guaranteed.



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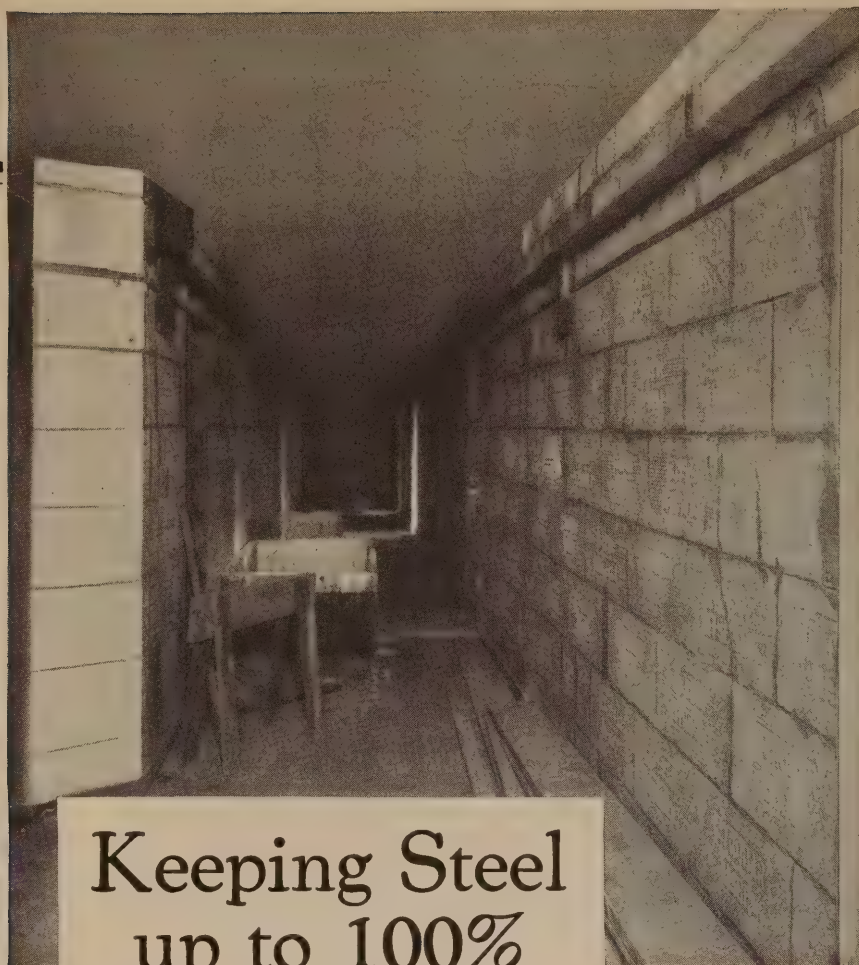
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No. 1

No. 3



Cut No. 1—Panel in Mantle, Odd Fellows Home, Middletown, Pa.  
Four Colors, Matt Glazed Finish.

W. H. Lee, Architect, Philadelphia, Pa.

Cut No. 2—Panel in Atlantic Refining Company Service Station,  
Norristown, Pa.

Old Ivory Matt Glazed Finish.

Joseph Franklin Kuntz, Architect, Pittsburgh, Pa.



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Cut No. 3—Panel in Pleasantville National Bank, Pleasantville, N. J.  
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Bertram Ireland, Architect, Atlantic City, N. J.

*All of the above were furnished by the*

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## Why Appalachian Is Sincere Marble

WHEN the architects of ancient Greece wrote their marble specifications, they used two Latin words, "sine cera"—*without wax*.

Afterward, while the English language was yet comparatively young, a letter was signed "sincerely" to signify the writer required no wax to seal it, for everything contained therein was genuine, true, straightforward and free from hypocrisy or dissimulation.

Today Webster's Dictionary defines "sincere" as pure, unmixed unadulterated; whole, sound, perfect; being in reality what it appears to be; not falsely assumed; genuine, true, real; honest, straightforward, etc.

The Latin words *sine cera*, and the English word *sincere*, perfectly describe Appalachian Tennessee Marble. It is an interior marble that never requires wax. Its appearance of lasting beauty is not falsely assumed but is true and real.

Appalachian Marble is Sincere Marble. Each time Appalachian Marble is used, it is as though marble "sine cera" had been specified.

*For accurate cost estimate on Appalachian Tennessee Marble—marble sincere in every sense of the word, send blue prints and specifications to our Service Department.*

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Doorway of Residence, Staten Island, N. Y. C. E. Grieshaber, Architect

WHAT could be more inviting than the chaste elegance of this entire effect? The Colonial doorway, the beautifully done Flemish Bond and the soft, rich tones of the brick leave nothing to be desired. In "Architectural Details in Brickwork" you will find many

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Williamson Building, Cleveland, Ohio. Geo. B. Post & Sons, Architects.  
Photo showing building in course of cleaning by ordinary washing process.

## SIMPLY WASH IT

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## New Walls for Old

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The accompanying illustrations of the National Theatre in Washington, D. C., present an example of successful remodelling in which the walls of the original brick structure have been faced with Indiana Limestone. The resultant effect is one of great dignity and simple beauty.



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### COMMUNITY MAUSOLEUM

Kansas City, Missouri

SIDNEY LOVELL, Architect



Georgia Marble used throughout. The two interiors show the different arrangement in private rooms.



MANY community mausoleums have been erected—both exterior and interior—of Georgia Marble. The beauty of Georgia Marble makes it an ideal material for such buildings; it is practically impervious to moisture.

We produce three varieties of Georgia Marble that are being used in mausoleum work—white pink, and grey.

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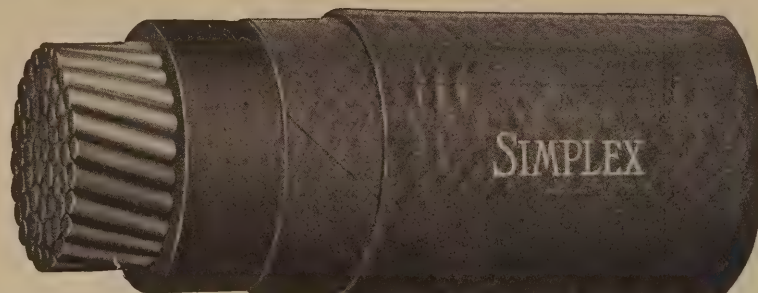


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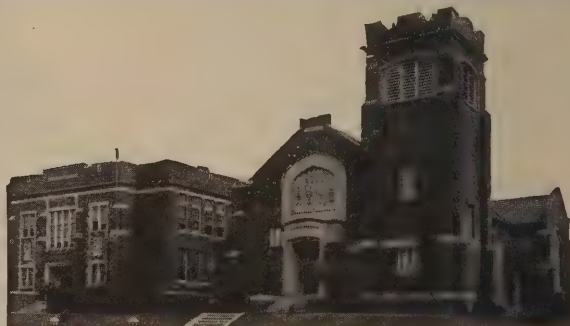
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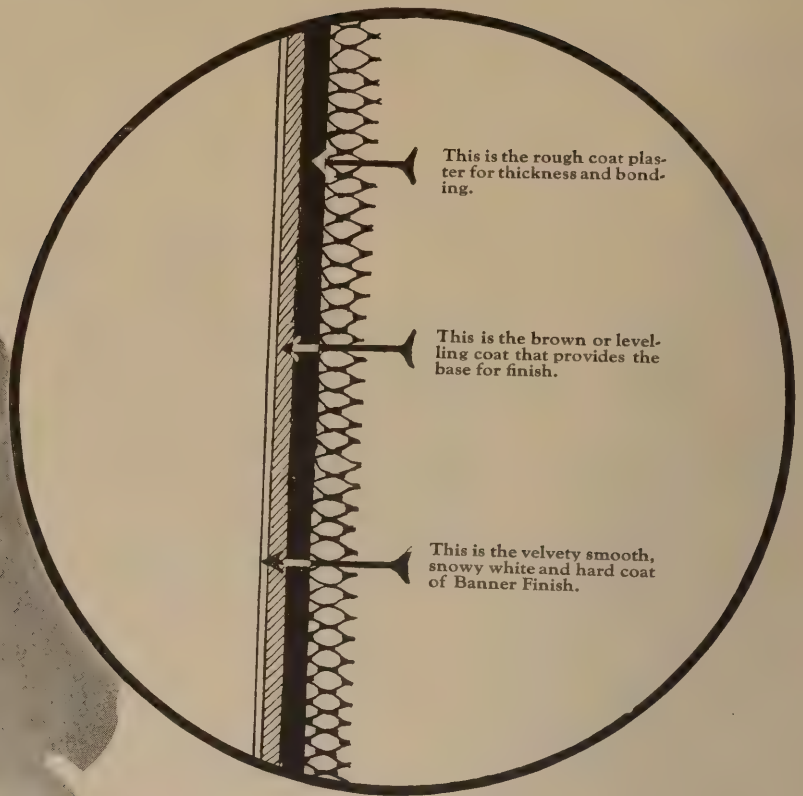
LITTLE SISTERS OF THE POOR HOME, Kansas City, Mo.  
Architect, Hoyt, Price & Barnes  
Contractor, Swenson Const. Co.



ST. MARY'S SEMINARY, Norwood, Cincinnati, Ohio  
Architects, Kunz & Beck  
Contractor, Ferro Concrete Const. Co.



Architect—FRANK L. PACKARD  
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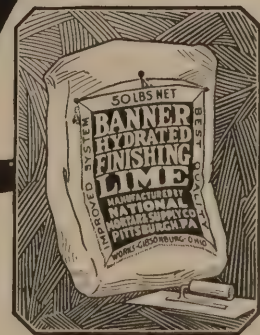
## National Mortar & Supply Company

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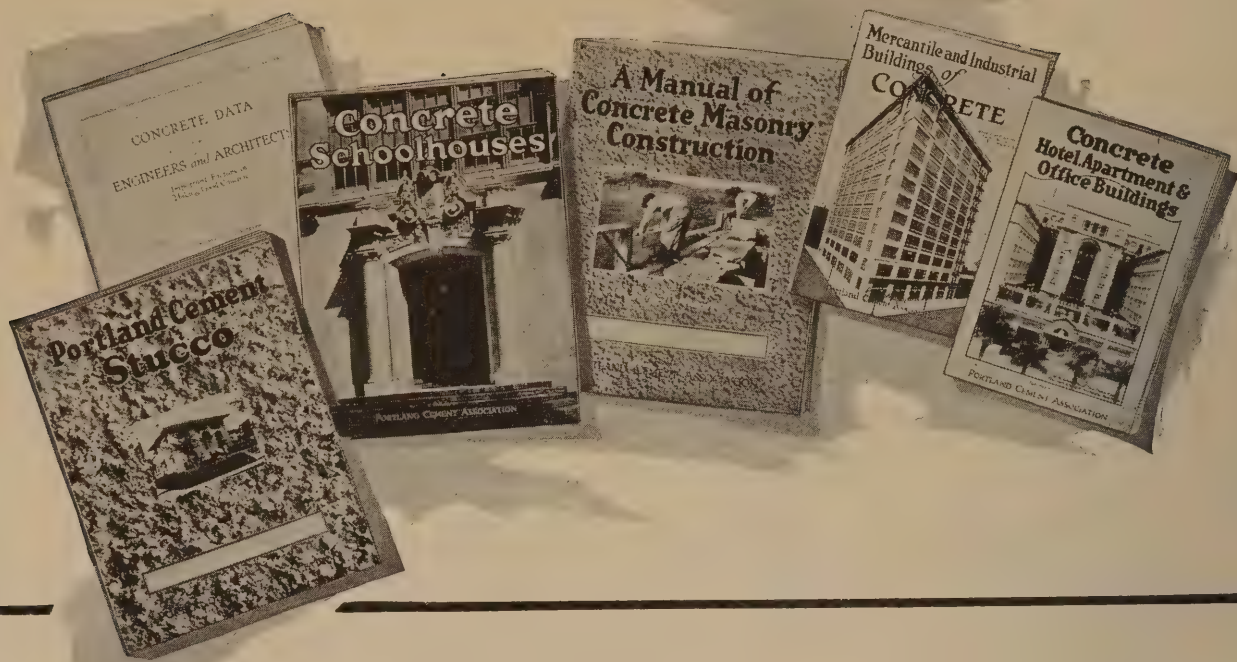
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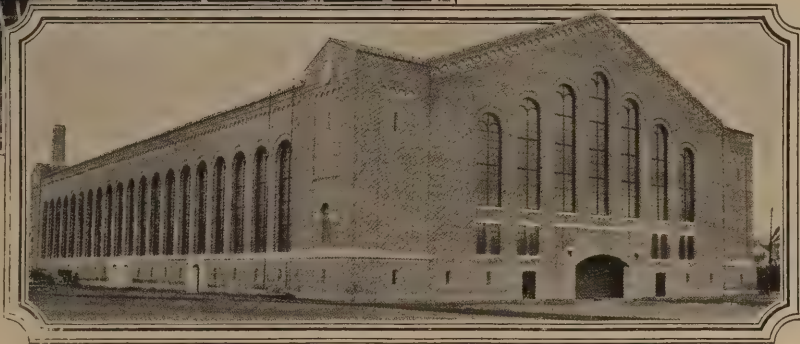






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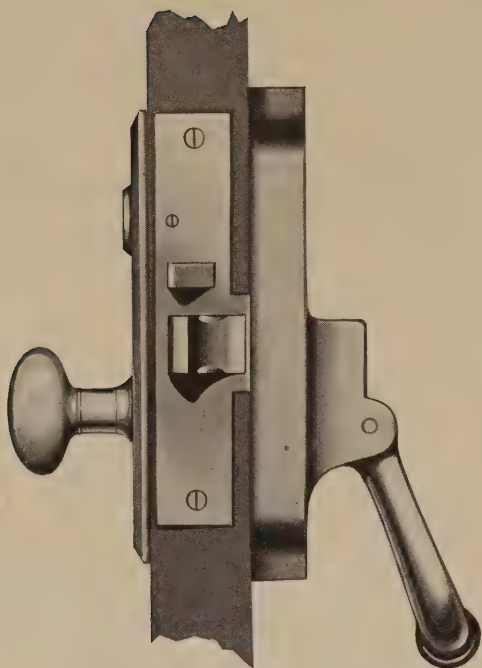
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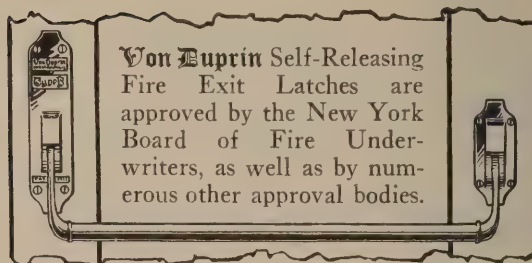
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(Patent Applied For)

*See page 80  
In the New Catalog*



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# BOOK DEPARTMENT

## Old English Walnut and Lacquer

**D**URING the progress of the English Renaissance, as one style of architecture came into vogue and triumphed for a time before being followed by another, the furniture was passing through similar stages of evolution, so that at any time the accessories which went into an interior were designed and built with a view to making the most of the interior's advantages, while the interior itself was designed to create an attractive setting for furnishings, the result being that rare harmony which many architects are striving to achieve to-day. The furniture during that long period was made of different woods; oak, for example, being plentiful in England, was in constant use up to the time of the Restoration, when the returning Stuarts set the fashion for the walnut to which they had been accustomed in France and Holland and which held its vogue until it in turn was supplanted by mahogany early during the Georgian era which followed.

This volume, by the author of the well known work "The Present State of Old English Furniture," is a review of the walnut period, dealing also with the lacquer which was fashionable for furniture at a time which was about that of the beginning of the walnut age. The period was one when England had been absorbing for a century or more the ideas in architecture and decoration which had reached the island from several European countries and which had been sorted, sifted, and generally assimilated into what pleased the English taste and suited the English temperament, and walnut with its fine, rich grain and smooth surface, and particularly with the ease with which it could be given a beautiful finish, was found to be well adapted to the needs of furniture makers. During the walnut age there were made many of the masterpieces of furniture which are in existence even yet, each year adding something to the mellow brown or gold of their patina.

The large scale of domestic interiors of this period led to a demand for pieces of furniture which were of vigorous sizes. A favorite piece was the "bureau-bookcase," and another was the "bureau-writing cabinet," either piece being a writing desk topped by a superstructure which frequently possessed pilasters and a fully developed entablature and some sort of a pediment, generally broken or scrolled. Another piece of furniture sufficiently massive and decorative to hold its own in

rooms which were fairly large scaled was the chest of drawers mounted upon legs, this as well as the aforesaid "bureau" being of walnut which was richly figured, use sometimes being made of veneer to produce the effect of "matched" panels in drawer fronts or large surfaces, and often adorned with mounts of gilded metal or else with gilding applied directly to the wood. One more use for walnut was in affording a ground for marquetry of woods in different colors, an art in which the craftsmen of this age excelled, producing work of marvelous fineness and beauty, particularly in the tall clocks which have never been as beautiful as during the later Stuart period in England.

The vogue for lacquer acquired a firm foothold in England about 1660 and lasted for approximately 75 years. During the reign of Elizabeth products from the Orient were at least known, and both the Dutch and the English East India Companies were formed. France and Holland were also interested in the use of things Oriental, and on the accession of Charles II this craze spread to England where it was fostered by the court. Lacquer was at first used chiefly for "bureau-bookcases" and other bulky pieces, but later it was used upon furniture



Two-Chair Back Walnut Settee (1735)  
Full-page Plate Illustration from "Old English Walnut and Lacquer Furniture"

of all kinds and even on pieces of walnut, and later still the wainscoting of rooms was lacquered. So general became the use of lacquer that the process was successfully imitated by English workmen, their process being called "Japanning"; thus in time furniture of all kinds and even wainscots were being "Japanned."

As in his other works, Mr. Symonds writes with the point of view of collectors and connoisseurs in mind, and he gives considerable data which concerns the "quality" or the "state" of a piece, its general character, grain, patina, and the other points which determine its desirability. He dwells, too, as he always does, upon an exposure of the tricks and wiles practiced by those who would trade upon the gullibility of collectors by the manufacture and sale of bogus antiques—which, to be sure, are often nearly as beautiful as the genuine pieces. Few people object to the use of reproductions which are frankly sold as such, but often success in simulating age leads to palming off reproductions as real antiques.

**OLD ENGLISH WALNUT AND LACQUER FURNITURE.** By R. W. Symonds. 176 pp. Fully illustrated, 9 x 11 ins. Price \$8.75. Robert M. McBride & Co., New York.

Any book reviewed may be obtained at published price from THE ARCHITECTURAL FORUM



**HISTORIC GARDENS OF VIRGINIA.** Compiled by The James River Garden Club. Edited by Edith Tunis Sale. 355 pp., 7¼ x 9¼ ins. Price \$10. The William Byrd Press, Richmond, Va.

**E**ARLY settlers in Virginia carved from virgin forest a land which as nearly as possible was a miniature England. Named in honor of a virgin queen, Virginia was not settled by the lowly of the earth. Scions of old families, each with its pride of birth and coat of arms, preempted the waterfronts of the James and the Potomac, and presently there began to assume form the old country houses which still survive the vicissitudes of centuries. Now to make a garden is in the English blood, and there was no old house along the James which did not possess its garden, laid out in the formal and precise manner of the seventeenth century, or the eighteenth, its gay parterres edged about with box borders or hedges, and with a riot of color supplied by many of the plants which had flourished in English gardens together with some native to America. It is not difficult to picture these old gardens at the height of their splendor when the Virginian ladies and gentlemen in their silks and laces strolled up and down their shaded lanes or alleys.

Into this beautiful volume there are gathered illustrations, plans and descriptions of many of the gardens which form parts of these historic estates. Compiled by members of a Garden Club, each of these old plantation or country houses has been dealt with by someone particularly well fitted to write regarding it. Being a work on gardens, the volume is essentially a garden book, but so intimately is a garden related to its surroundings that views, plans and descriptions of the gardens include also those of the houses to which they belong, and in this day when gardens and gardening are regarded with new interest by owners of countless country places large or small all over the land, this volume on the fine old gardens of Virginia will aid in the planning and building of new gardens, which perhaps is one of the aims of its authors. In addition to being written in a vein which is highly attractive, the volume is produced in excellent form and distinguished by many illustrations in color of gardens which are notable.

**MASTERS OF ARCHITECTURE.** A Series of Monographs, Issued Under the General Editorship of Stanley C. Ramsey. Inigo Jones, by Stanley C. Ramsey; Sir John Vanbrugh, by Christian Barman; Nicholas Hawksmoor, by H. S. Goodhart-Rendel; Sir William Chambers, by A. Trystan Edwards. Each containing about 28 pages of text and 34 half-tone plates 7½ x 10 ins. Price \$2.50. Charles Scribner's Sons.

**I**N the building up of an architect's library attention must be paid to a number of different departments. Design, construction, ornament, furniture and interior decoration, and the history of architecture are all important, and so too is the field of biography, the history of individual architects or perhaps of architectural firms, which naturally involves some study of their work and their influence both as individuals and as architects upon their times. The field of biography has perhaps been neglected in behalf of other kinds of architectural publishing which have seemed to have more immediate interest or more direct appeal, but there are both interest and importance in whatever aids in securing that "background" which is so important to the proper appreciation of architecture to both the layman and the architect.

The profession, in its present sense, is of no great age, for during many centuries knowledge of architecture was part of the equipment of a master builder—or perhaps, differently put, master building was one of the functions of an architect. At any rate, the names of but few great architects have survived up to the time of say Inigo Jones, and we search almost in vain for the names of the architects of the Gothic cathedrals. When a name is found, it is more than likely to be that of some ecclesiastic—some prince-bishop, whose enthusiasm led to his projecting building operations on a great scale in which he himself perhaps functioned ostensibly as architect and presided over a staff of workmen and craftsmen who did his bidding. The function of an architect, in the present meaning of the term, is therefore comparatively modern.

The volumes listed here constitute the beginning of what is intended to be a series of monographs or little biographies of men or firms of such importance that their names are written in large letters in the history of architecture. The volumes are extremely well illustrated.

**STAINED GLASS TOURS IN SPAIN AND FLANDERS.** By Charles Hitchcock Sherrill. 245 pp., 6 x 9 ins. Illustrated with half-tones. Price, \$3.50. Dodd, Mead & Co., New York.

**T**HE enthusiasm of a layman for a particular form of art may sometimes mean the presenting of the art from a point of view which is quite different from that likely to be taken by someone who has made it a subject for critical study. An example may be found in General Sherrill's studies of stained glass and in the volumes, "Stained Glass Tours," in various countries, wherein old glass is visited and described. In his "Stained Glass Tours in Spain and Flanders" there is given a study of glass in the old cities of these countries. Flanders, now partly in Belgium and partly in Holland, was for more than a century subject to the Spanish crown, and from Flanders came much of the sculpture, painting, and art in other forms which even today adorns the churches and cathedrals of Spain.

The glass in most old Spanish cities partakes of many of the qualities of Spanish architecture itself. It is in a sense poignant and dramatic, its somewhat heavy Gothic differing from the delicate, airy, almost lace-like Gothic of France and the restrained, refined Gothic of England, and its Renaissance assuming a form entirely its own. Spanish glass differs from that found in France and England in several ways and particularly in its color, for with the brilliant sun of the Mediterranean the glass in Spanish churches, in order to properly subdue the light, must be of a deep and somber richness quite different from that appropriate in the less sunny portions of northern France or under the cool, gray skies of England. All the characteristics and qualities of the glass of the country are touched upon by General Sherrill in these volumes which are neither glorified guide-books nor technical treatises on glass, though they possess certain characteristics of both. It would be difficult, unless one were an experienced traveler, to plan an itinerary to include in a brief time visits to so many of the shrines of old glass, and the descriptions and illustrations of these venerable cities and their treasures of glass are presented from a viewpoint which, as already suggested, gives the studies a value which is all their own.





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# THE ARCHITECTURAL FORUM

VOLUME XLI

NUMBER 2

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Solving the Housing Problem

ALBERT J. MacDONALD, Editor  
PARKER MORSE HOOPER; PAUL W. HAYES, Associate Editors

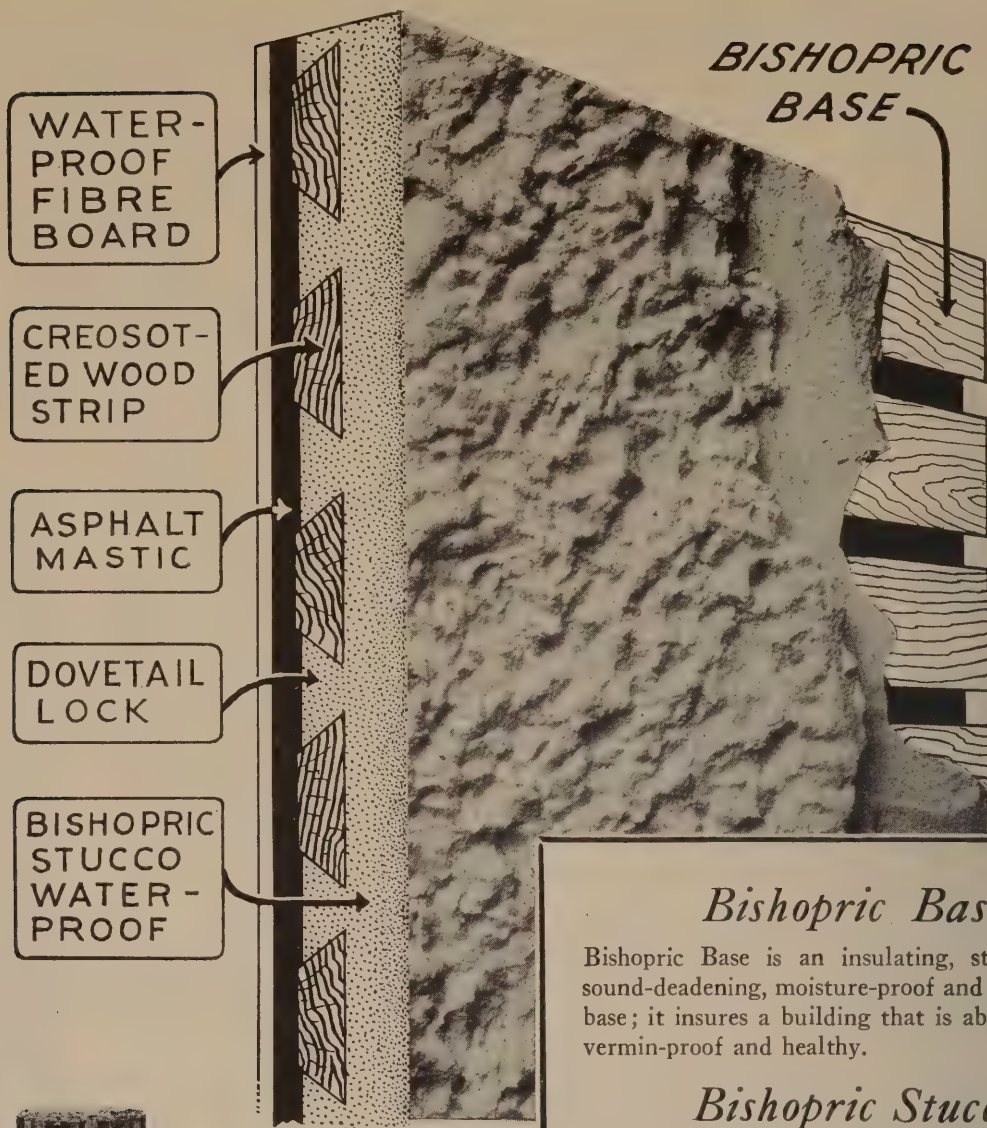
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# THE EDITOR'S FORUM

## AWARD OF BOOTH SCHOLARSHIP

THE first award of the George G. Booth Traveling Fellowship in Architecture has just been made by the College of Architecture of the University of Michigan. Of the nine competitors who made entries, the designs of two were of such nearly equal merit that the jury decided to divide the \$1200 income of the Fellowship between Marion F. Blood, a member of the Class of 1924, and Ralph R. Calder, who was graduated in 1923. Both have had office experience in addition to academic training, and both are students of high scholarship. The annual income of the Fellowship being \$1200, each received \$600, to which Mr. Booth generously added \$500.

## ROTCH TRAVELING SCHOLARSHIP

THIS year's award of the Rotch Traveling Scholarship was made to Eugene F. Kennedy, Jr., of Boston, by a jury consisting of Ralph Gray, George Howe and Otto Faelten. The trustees of the Rotch Fund concurred in the award, and the Boston Society of Architects voted its approval. Second place was given to Leo. A. Whelan, also of Boston, who received the prize of \$100 in gold.

The income from the Rotch Fund provides for the annual payment to the recipients of \$1500 for a period of two years. During the 40 years that the fund has been established, an equal number of young men have enjoyed its benefits. One-half have been Massachusetts men and the remainder have come from 12 other states and foreign countries, the only condition for competitors being that they be citizens of the United States, under 30 years of age and must have been engaged in professional work during two years in the employ of a practicing architect resident in Massachusetts.

## A MEMORIAL EXHIBITION

AT the Art Center, 65 East 56th Street, New York, there is being held during the summer an exhibition of work by the late Bertram Grosvenor Goodhue which pertains to printing and book illustrating. In addition to the drawings for the bulletin of the Maryland Cathedral and for the well known Cheltenham type, there are copies of Rossetti's "The House of Life," "The Love Songs of Proteus," by Blunt, and "Sonnets from the Portuguese," the borders and initials of which were designed by Mr. Goodhue, while perhaps the most interesting item is the edition of the Book of Common Prayer, the type and decorations for which were designed by Mr. Goodhue for the Merrymount Press, while the illustrations were by the English artist, R. Anning Bell. The exhibition proves anew the value of Mr. Goodhue's skill in this work.

## 10,000 ARCHITECTS IN 1926

IN forming a plan for developing the membership of the American Institute of Architects, according to the *New York Times*, it has been estimated that by 1926 the number of architects in the United States will be 10,000.

The Institute, it was said, must enroll 4,000, or 40 per cent of this number, in order to make it truly representative of the profession. The Institute now has 2,774 active members. Last year a net gain of 230 was reported. This year the net gain is only 153. There has been a gain of 1,332 in three years.

The New York Chapter, founded in 1867, has nearly 400 members. The Brooklyn Chapter, founded in 1894, has about 100, and the New Jersey Chapter, founded in 1900, has more than 130 members. Broad plans of expansion, both in the public interest and in the direction of more effective professional organization, will be carried out during the administration of Mr. Waid, culminating in the next national convention of the Institute, to be held in New York in 1925 in connection with a great international exhibition at the Grand Central Palace.

## THE BEAUX ARTS

IN speaking in Boston lately before a body of architectural students, Professor Albert E. Ferran, who has been teaching at the Massachusetts Institute of Technology, touched upon the early history of a great institution.

In introducing his subject the Professor gave a brief outline of the *École Nationale et Speciale des Beaux Arts*, which was founded by Colbert in 1648, under the title of *École Academique*. It received its present title in 1793. Pupils are admitted from the age of 15 to 30 years, after examination, in one of the sections of painting, sculpture and architecture.

The number of students has always been limited to those who were fitted by temperament and inclination to do the work required. In 1720 there were only 22 students, although the school had been established more than 70 years. Unless the student obtains the required number of mentions and medals he is sent back to do the work over again.

In 1761 Blondel started his academy, which by his *Cours d'Architecture* did so much to stimulate an understanding and appreciation of the art of building. In 1785 the *Prix de Rome* was established, and Fontaine was the first *pensionnaire* of this famous institution. The speaker told of the origin of the loge and the atelier systems, the latter by Blondel's son, the famous Pontist. During the revolution the teachers carried on the work from their private funds until the authorities realized that this was properly a government function.





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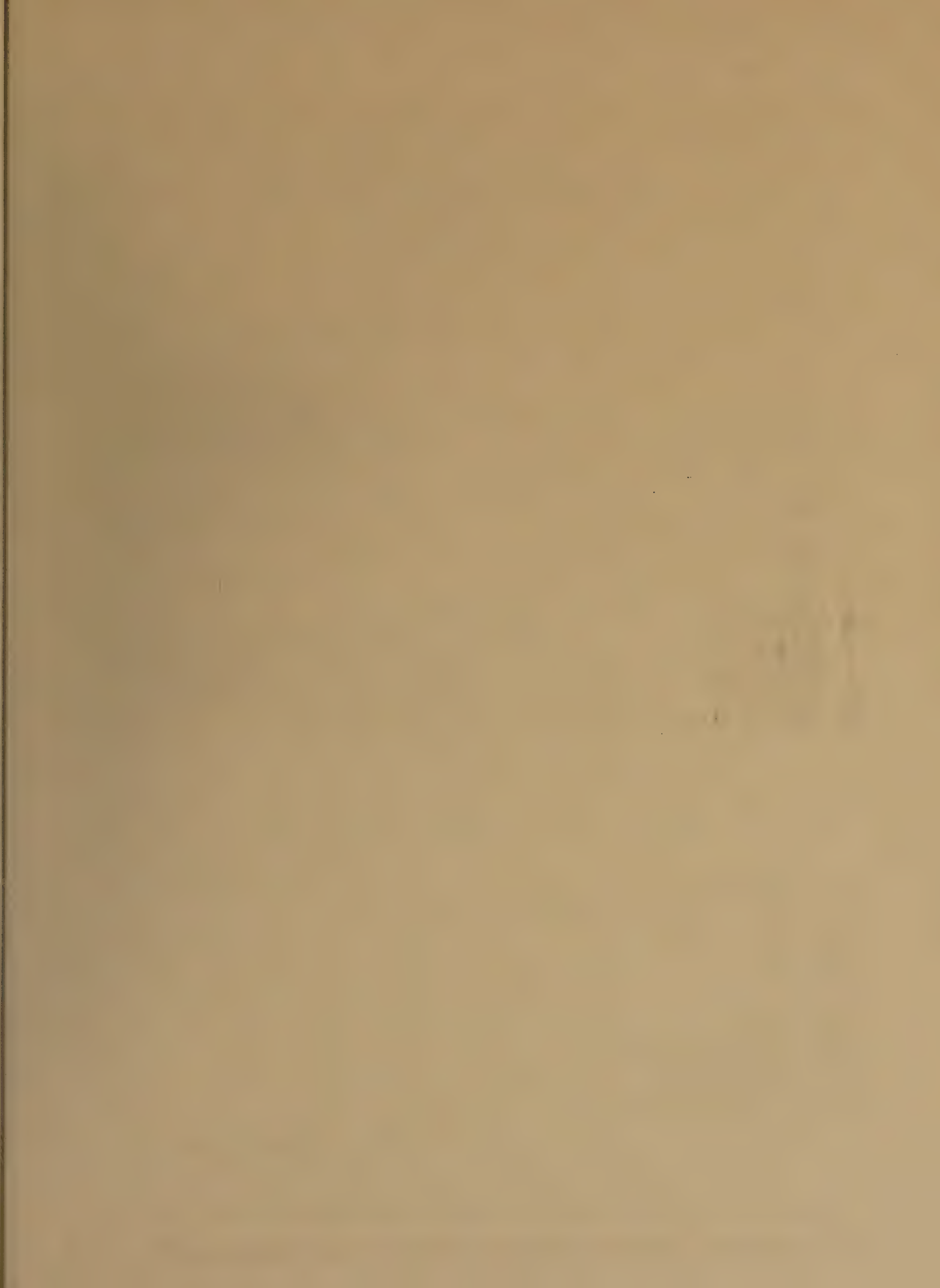
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PALLADIO'S HOUSE, VICENZA  
FROM PENCIL DRAWING BY  
LOUIS C. ROSENBERG



# The ARCHITECTURAL FORUM

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Number 2

## Notes on Planning of Grounds and Buildings

By GEORGE HOWE

WHEN once the habit of reading architectural plans has been acquired, it is as irresistible and as satisfying as reading; even greater, for with plans the reader assumes in person the title role of the young detective, and admires in himself those qualities of unerring insight usually possessed only by imaginary heroes.

Here, then, lies the plan of a house and grounds, with the owner's name and the location clearly inscribed upon it, ready for study. It is evident that this plan has been considered as a whole from the outset, that every portion of the ground has been assigned its suitable use, and that the orientation of the property, with its longer axis running north and south, has been turned to advantage. The house itself is of a size appropriate to its surroundings, small in proportion to the gardens and service quarters about it—no Newport "cottage," bulging over its surroundings as a hen over her eggs. These may seem trivial observations, but from them, Holmes-like, it is possible to deduce the most important facts: first, that the owner is a man of sense and modesty; second, that his sound judgment has led him to select an architect of taste and human feeling.

It would be possible to puzzle the lay reader at this point with a display of the customary formulæ every architect has acquired in the schools. "See," one might say, "how the longitudinal axis is given interest and variety, first as it is broken by the transverse line of the house, supported by the suggested cross axis of the minor buttresses formed by the flower garden and the playground, and secondarily by the subordinate changes where the entrance drive develops into a court, whose width is carried through the house to the variation of the woodland vista beyond, until it is narrowed and stopped off at the inlet to the vegetable garden, to be carried on and completed by a double row of fruit trees. The relation of the various segments of this longitudinal axis to each other is studied with great discretion, as is also the relation of every part of each transverse section to the next." By these statements it is meant to convey the information that the plan does indeed meet the most exacting tests of scholastic examina-

tion. But what of that? As a matter of fact, very much of that, for the rules of the schools, in spite of every attempt of the schoolmaster to reduce them to cold and meaningless formulæ, are still based on truth and on life. Only their meaning has been lost.

Look, then, at the entire length of the property. About one-third of it is given over to the entrance drive and forecourt, just enough to leave a fine shield of woodland between the house and the highway. That is a just proportion, under the circumstances. If the circumstances were different, the just proportion would be different. There is no rule in the matter. About the equivalent portion of the length is given over to a grassy woodland walk, a pleasant place to linger, and one may assume that the owner is of a meditative and leisurely turn of mind (at least, if he is not, he cannot derive the full benefit from his delightful grounds). Its dimensions in feet and inches are of no importance, and if it were to serve some other purpose, it should be different in size, or shape, or proportion, as the case may be. So again with the flower garden, the playground, the service yard and the vegetable garden.

One might emphasize the human quality of design in plan in order to dispel two fallacies which have taken root in the layman's mind: first, feeling too great a respect for scholastic formulæ, as being absolute and unalterable; and second, a complete contempt for them as being inapplicable to real life.

How ably this problem has been solved by their use! Here is a long piece of woodland property. Cut a few holes in it, lengthwise and crosswise, place a house on it, and there it is, an Anglo-Saxon's castle, all complete! But it requires doing, and the doing is the real difficulty, and over the doing some single mind must preside. The architect's load of responsibility has become very heavy in these modern times, and he is indeed a strong man who can prevent the child of his brain from being broken on the wheel of the vicious circle before it is weaned!

Speaking of the vicious circle of modern specialization, there was a time when men in their leisurely way, though they might excel in one art or trade, were yet practicing adepts at many, with an under-





VINE-COVERED FACADE, FACING ENTRANCE DRIVE AND COURT



SHUTTERS OF MAIN DOOR STAND OPEN



TERRACE RAIL AND SLEEPING PORCH

HOUSE OF ERNEST S. BALLARD, ESQ., HUBBARD'S WOODS, ILL.

EDMUND B. GILCHRIST, ARCHITECT

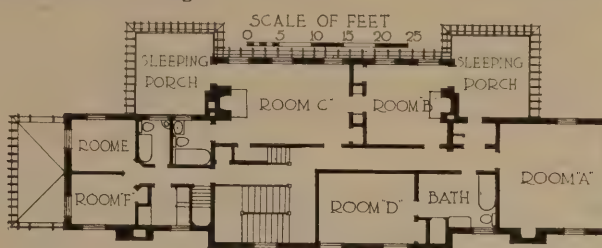




Garden Front and Terrace From the Allee Through the Woods



First Floor Plan



Second Floor Plan

standing of all. Such men were capable of coöperating with their fellows, and in architecture the intelligent coöperation of many minds is essential. Now, however, someone has set a new ideal of human intelligence: the one-track brain. Men equipped with such brains can only repeat a single act, under definite instructions, until told to stop. And as the type becomes more common, the number and variety of details on which the architect is obliged to issue instructions becomes ever greater, and the amount of help he receives becomes ever

less. Often, in despair at last of being able to cope with the situation, he takes his place in line with the rest, and turns his responsibility over to the contractor and the owner, neither of whom is equal to it.

No such unhappy fate, however, has overtaken this charming house and garden, which Edmund B. Gilchrist, Architect, designed and built for Ernest S. Ballard, at Hubbard's Woods, Illinois. Here is a plan which shows coöperation on the part of all, the owner and the architect in particular, and every such plan today is a fresh triumph of mind over matter.



Plot Plan Showing Grounds and Buildings, Estate of Ernest S. Ballard, Esq.

Edmund B. Gilchrist, Architect





FIREPLACE AND BOOK SHELVES IN PANELED LIBRARY

HOUSE OF ERNEST S. BALLARD, ESQ., HUBBARD'S WOODS, ILL.

EDMUND B. GILCHRIST, ARCHITECT



SIMPLICITY OF TREATMENT GIVES CHARM TO THE DINING ROOM

HOUSE OF ERNEST S. BALLARD, ESQ., HUBBARD'S WOODS, ILL.

EDMUND B. GILCHRIST, ARCHITECT



# Two Notable Houses on Sutton Place, New York

THE HOMES OF MRS. W. K. VANDERBILT AND MISS ANNE MORGAN

MOTT B. SCHMIDT, ARCHITECT

**D**UE to the growth and northward trend of the retail shopping district, the mansions of New York's oldest and richest families are one by one disappearing from Fifth Avenue, which for the past 60 years has been the center of wealth and fashion. This exodus is taking the former residents of the Avenue into spacious apartments and remodeled street houses on the east side. Many are leaving to make their permanent homes in the country, where estates are constantly increasing in size and number, as country life occupies more and more the time and interest of city people.

Over the minds of many, however, the spell of the streets still holds sway. The spell of old New York, to which romance and history contribute largely, may yet be felt by people with imagination in the former centers of trade and fashion, the Battery, Bowling Green, the Bowerie and Washington Square which all revive memories of colonial days. In Union Square and Gramercy Park lived the elite of the "Fabulous Forties," when the curious conventions of the Victorian Era ruled social conduct. Lovely, quiet old squares, which all of them were once, have long been given over to business or boarders, to trade or tenements.

In planning the New York of today the thrifty city fathers adopted the economical gridiron plan of avenues and streets, leaving scant space for the squares and little parks which make London so lovable and livable. As the old time squares and parks have been abandoned to the advancing tide of commercialism, the householders have been seeking in vain for other open spaces on which to face their houses. The avenues and streets enclosing the open acres of Central Park are completely given over to club houses, great apartment buildings, hospitals, museums and fast disappearing palatial mansions. There is no chance here for the

small house dweller, so he is turning to the side streets, remodeling with individual taste the old high-stoop houses, thus happily and rapidly replacing the monotonous mediocrity of unbroken brownstone fronts. But this opportunity for individualism, expressed in most of the remodeled street houses, is fortunately not sufficient to satisfy the artistic taste and romantic spirit of some; fortunately, especially for architecture, as other-

wise many unusual and delightful houses would never have been built, houses owing much of their charm to their immediate environs, without which their particular picturesqueness would not have been possible or practicable. Such locations, desirable and accessible, have been eagerly sought but seldom found on the map of Greater New York, so it is only due to the twists and turns of the East River that such locations as Beekman and Sutton Places exist. Community combinations by the owners of adjoining property have established such spaces as "Turtle Bay" on East 49th Street, where 20 "back yards" were transformed into a group of delightful low-walled gardens, all opening upon a broad center



Entrance Front, House of Miss Anne Morgan

walk with seats and fountains among the shrubs and trees, making pleasant interruptions. Many owners of remodeled street houses are turning their high fenced back yards into delightful little gardens, but it is only in the larger enclosures, such as "Turtle Bay" and Sutton Place, that a real beauty and picturesqueness are obtainable.

Sutton Place is a short street running from East 57th to 58th Street, the rear of the lots on the east side of which overhang the East River, just south of the Queensborough Bridge. Back of the houses on these lots a common lawn and garden looks down onto the fields and buildings of Blackwell's Island and the river with its constantly shifting scene of maritime activity. Such was the





Gateway into Garden of the Vanderbilt House

location, one of the most picturesque and secluded in New York, possessing much of the charm of the Thames Embankment, London, which Mrs. Vanderbilt and Miss Morgan chose for their city houses.

In Mrs. Vanderbilt's house, Mr. Schmidt, the architect, employed a free adaptation of the style of the English Renaissance, using as the inspiration for the main entrance one of the beautiful doorways in King's Bench Walk, London, designed by Sir Christopher Wren, and for the garden entrance a hooded doorway of the early Georgian period. The long front facade of this house, which faces south on 57th Street, is continued to the edge of the cliff overhanging the East River by a high garden wall. The two end elevations are narrow and comparatively unimportant, except that the east end has three tall casement doors, that in the center hooded, which open through antique iron gates upon a paved terrace overlooking the garden and river below. Trimmed with limestone, and built of old brick obtained from the building previously occupying the site, laid up with natural colored cement, and toned down slightly with a stain that gives the brickwork an appearance of age, the house might have been built a century ago.

The plans show a basement and three floors. In the basement are located the service and mechanical departments of the house, such as boiler room, man's room and bath, trunk and storage rooms, kitchen and servants' hall. On the first floor, which is seven steps above the sidewalk, there are a large dining room, serving pantry, coat room and reception room. The second floor plan shows a long drawing room,

center stair hall and one bedroom suite. The third floor has one large bedroom, with connecting dressing room and bath on the east, and a maid's room.

To a certain extent the interior was planned around an unusual collection of charming old furniture and other rare antiques which had been collected by Mrs. Vanderbilt during a period of many years. The dining room, for example, was designed to use as mural decorations and color scheme a set of old Dutch decorative paintings. And the reception room on the first floor, known as the little Georgian parlor, was built to take the antique deal paneling of an old English room. The decoration and color tone of the main hall and circular stairway, were carried out by Allyn Cox, who painted the walls in the Chinese manner to harmonize with two painted Chinese pagodas from the Royal Pavilion in Brighton, which were placed in this hall. The drawing room, on the second floor, is a splendidly proportioned room, 18 by 32 feet, with windows on the south and east. The severe panels and pilasters give dignity and reserve to the treatment of this room which is pleasingly relieved by a beautiful old Italian door opening into the hall, corner bookcases, comfortable chairs and couches. Lamps, tables, screens and other antique pieces add interest and livableness to this drawing room, in which the color scheme of blue and gold is contrasted with the dark marble fireplace mouldings.

Modern convenience and comfort mark the arrangement of the bedrooms and dressing rooms, which are decorated in a simple and unostentatious



Garden Terrace of the Vanderbilt House



manner. As practical requirements obviated the necessity for a cellar, all the mechanical equipment of the house, such as gas-fired steam boilers, hot water heater and vacuum cleaner machinery, is concentrated in a small machinery room in the basement.

The Colonial style, which is a development in this country of the architecture in England designed during the reign of the several Georges, was used by Mr. Schmidt for the design of Miss Morgan's house, adjoining the earlier English Renaissance residence of Mrs. Vanderbilt. The red Harvard brick, white painted shutters, and white marble trim recall the old houses of Philadelphia, Salem and New York. The garden or river front, which like the street facade, has a graceful doorway with deep paneled reveals, is more attractive architecturally because of the dormer windows and setback.

The plans show a basement and four floors, which have all been studied and developed with great care and cleverness, so that no waste space exists. The basement contains the mechanical equipment of the house, including the elevator machinery. To avoid the necessity of furnace-man, coal-man, ash-man, ice-man and garbage-man, the most modern mechanical appliances, such as incinerator for garbage, refrigerating plant, vacuum cleaner machinery, gas-heated hot water and steam boilers, were installed. The entrance on the first floor shows two outside doors, one entering the vestibule and main hall, the other leading into a long corridor on which open the kitchen, servants' hall, stairway, and man's room. Beyond the main hall is a spacious dining room, opening onto a paved terrace



Bedroom Fireplace, the Vanderbilt House

and open lawn overlooking the river. On the second floor is a large drawing room across the entire street front, which opens into both the elliptical stair hall and the foyer hall.

The interior of this house is also interesting because of the old and unusual furnishings, giving great distinction and charm. Entering from Sutton Place, a view of the river, through the vestibule, hall and dining room, which are on axis, may be had. In the hall and dining room a floor patterned in black, yellow and white marble, adds a rich note of color. An oak stairway taken from an early Georgian house, leads from the entrance hall to the drawing room floor above. Here an interior curved stairway, hung on the walls of an elliptical well, extends for two flights to the upper stories. Instead of the usual skylight, a more pleasing and more effective means of lighting this stair well has been found in the use of octagonal bull's-eye windows placed in the sides of the stair bulkhead or cupola. The library on the river side of the second floor, which is paneled in pine taken from an old English house, has brass grilles in the bookcase doors and star-backed crystal appliques on the pilasters. The small reception room on this floor is papered with a hand-painted Chinese Georgian wall paper, against which is hung an old Chinese Chippendale overmantel decoration.

No more valuable or successful examples of the consistent and intelligent use of English architectural precedent in the designing of American houses are to be found than these two houses on Sutton Place.



Boudoir Mantel, the Vanderbilt House





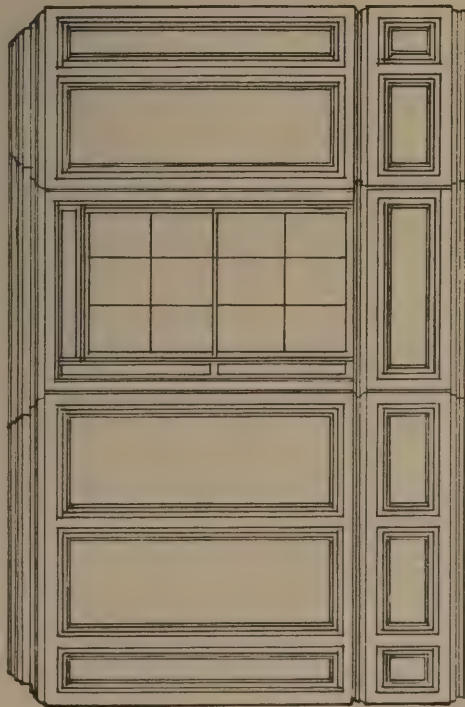
OLD ENGLISH WOODWORK ADDS INTEREST TO THE RECEPTION ROOM, KNOWN AS THE "LITTLE GEORGIAN PARLOR"

HOUSE OF MRS. W. K. VANDERBILT, NEW YORK

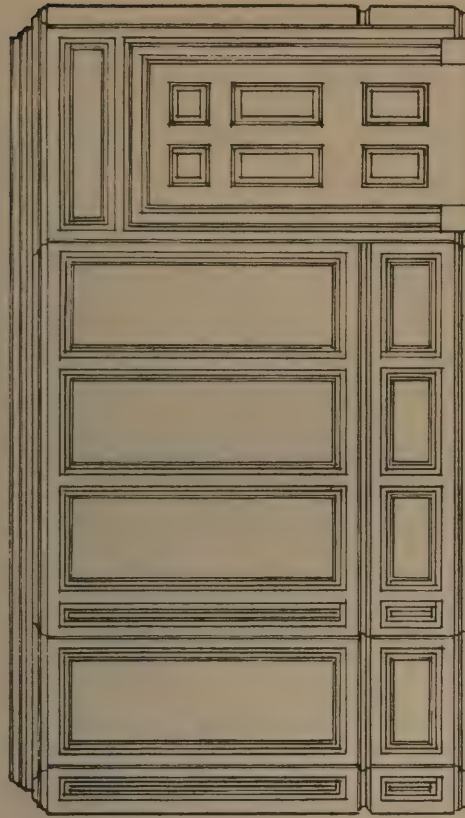
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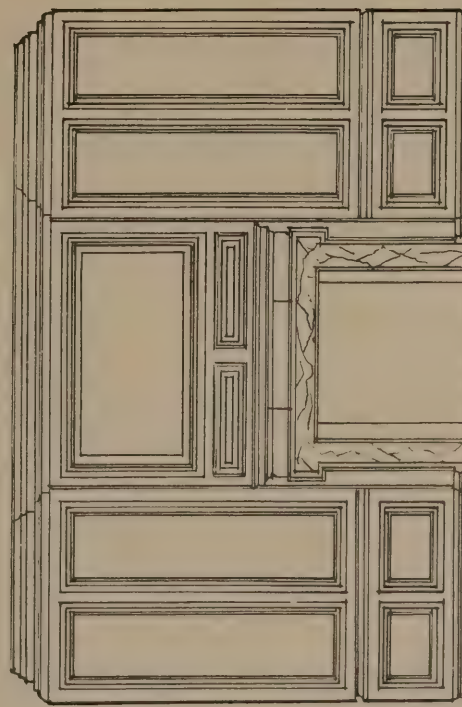




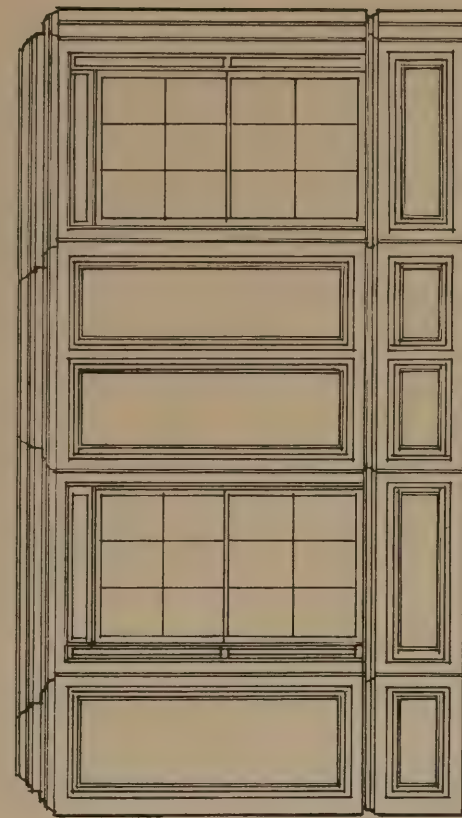
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

# RECEPTION ROOM RESIDENCE OF MRS. W.K. VANDERBILT

MOTT B. SCHMIDT - ARCHITECT

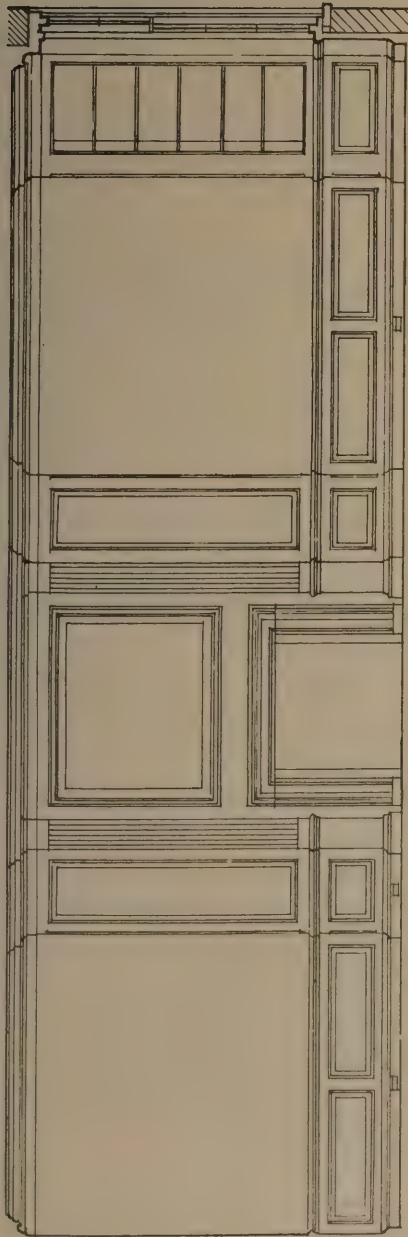
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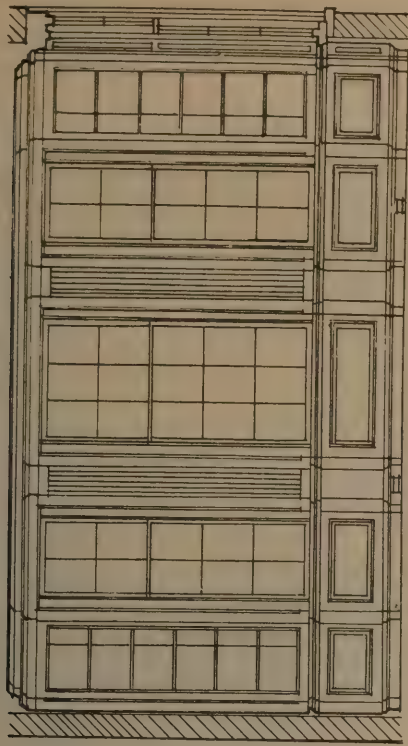


ONE SIDE OF DRAWING ROOM  
HOUSE OF MRS. W. K. VANDERBILT, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT

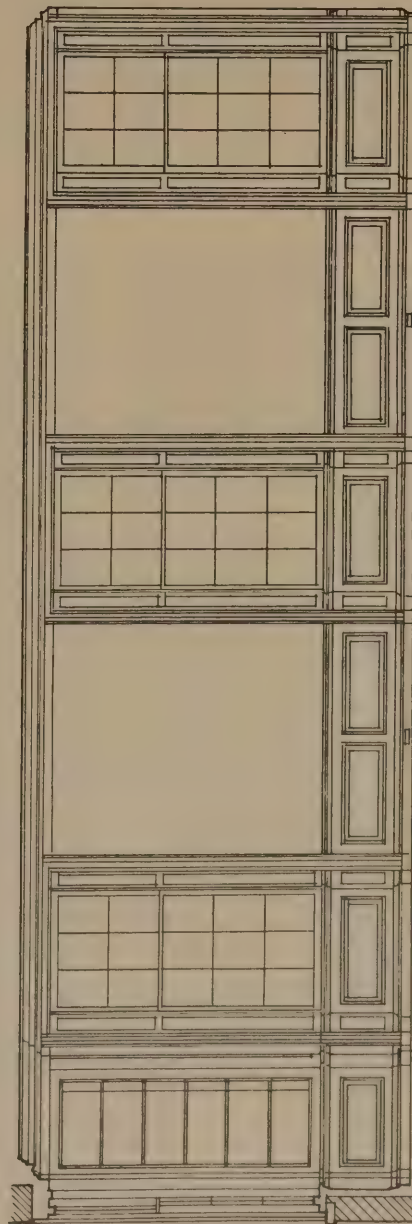




NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

DRAWING ROOM  
RESIDENCE OF MRS. W.K. VANDERBILT  
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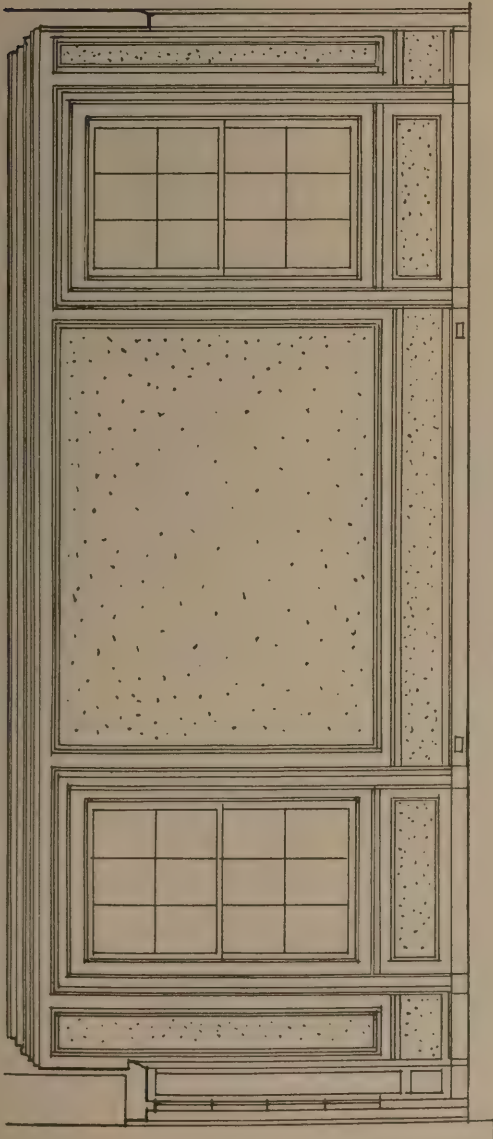


DINING ROOM, LOOKING TOWARD GARDEN TERRACE



CORNER OF DINING ROOM, WITH DOOR INTO HALL  
HOUSE OF MRS. W. K. VANDERBILT, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT

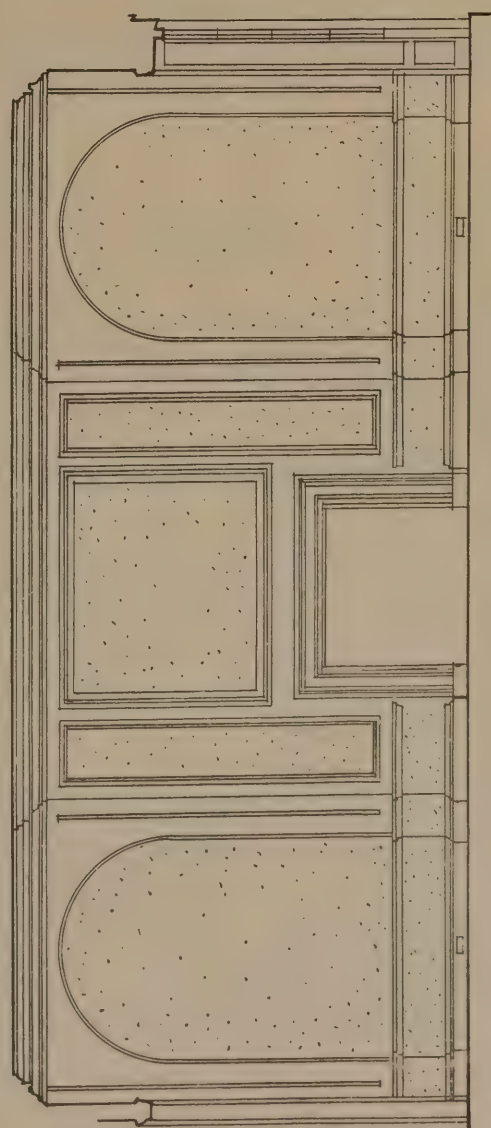




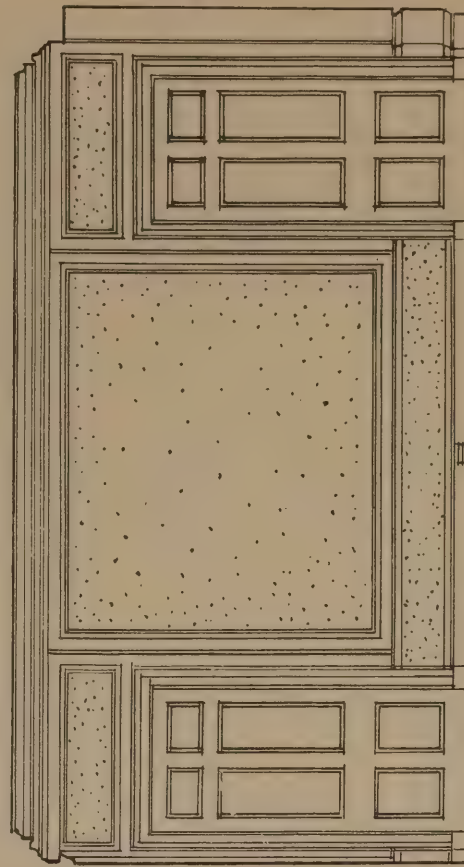
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

DINING ROOM  
 RESIDENCE OF MRS. W. K. VANDERBILT  
 MOTT B. SCHMIDT - ARCHITECT  
 SCALE:  $\frac{1}{4}$ " EQUALS ONE FOOT





STREET DOOR TO HOUSE OF MRS. W. K. VANDERBILT

MOTT B. SCHMIDT, ARCHITECT



GARDEN ENTRANCE TO HOUSE OF MISS ANNE MORGAN

MOTT B. SCHMIDT, ARCHITECT

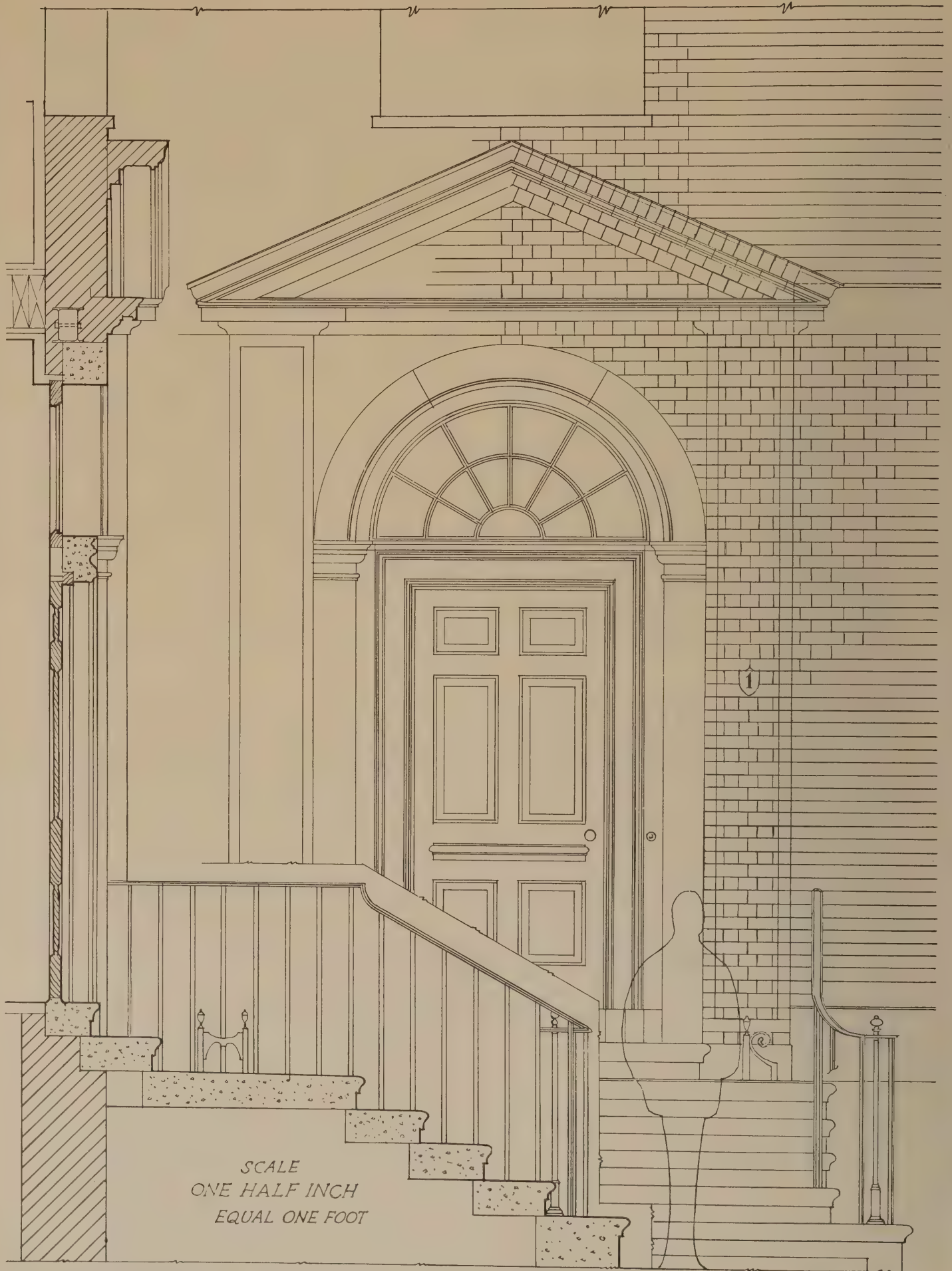




SCALE  
ONE HALF INCH  
EQUAL ONE FOOT

MORGAN HOUSE , SUTTON PLACE NEW YORK CITY  
MOTT B. SCHMIDT , ARCHITECT





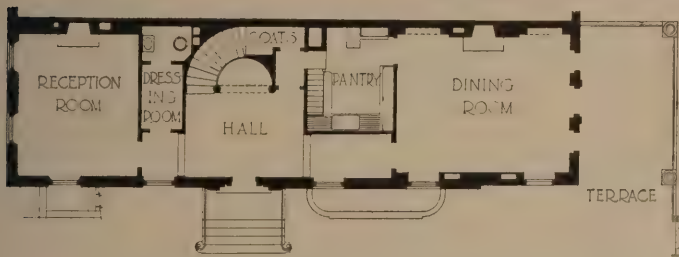
SCALE  
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EQUAL ONE FOOT

VANDERBILT HOUSE, SUTTON PLACE NEW YORK CITY  
MOTT B. SCHMIDT, ARCHITECT

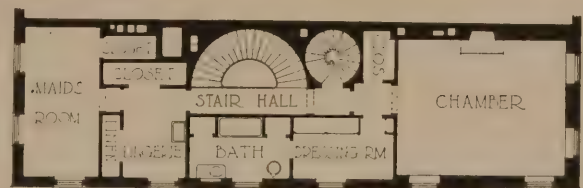




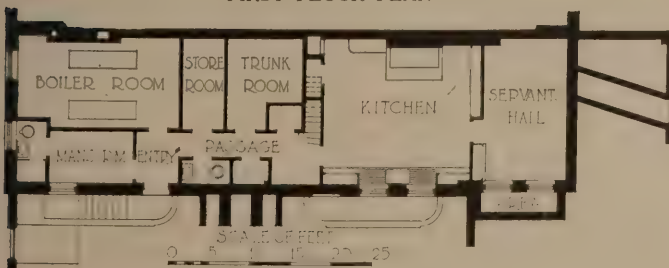
ENTRANCE FRONT ON EAST 57TH STREET



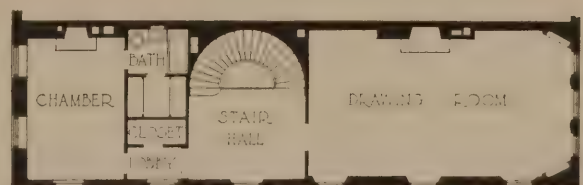
FIRST FLOOR PLAN



THIRD FLOOR PLAN



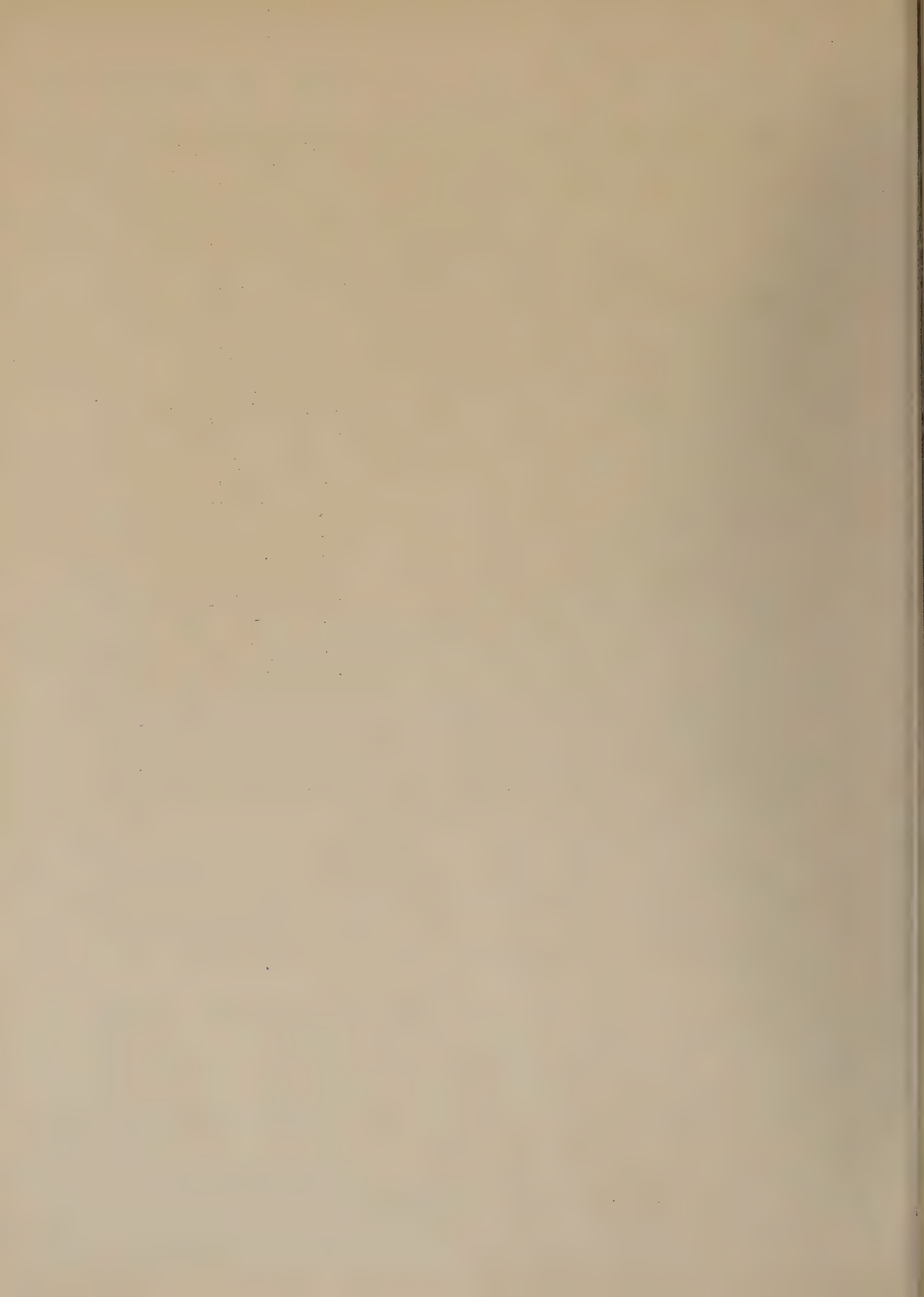
BASEMENT PLAN



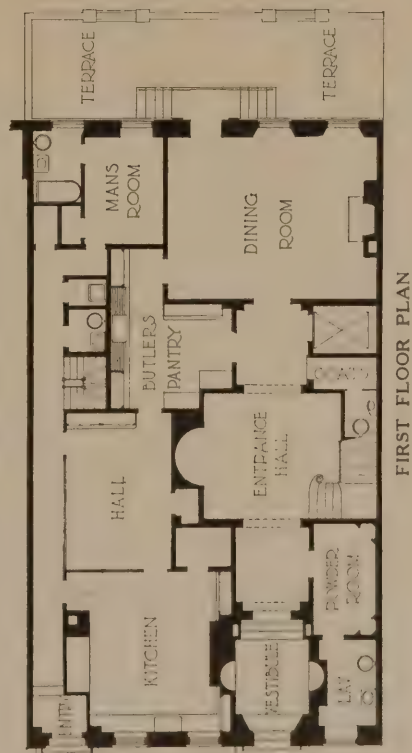
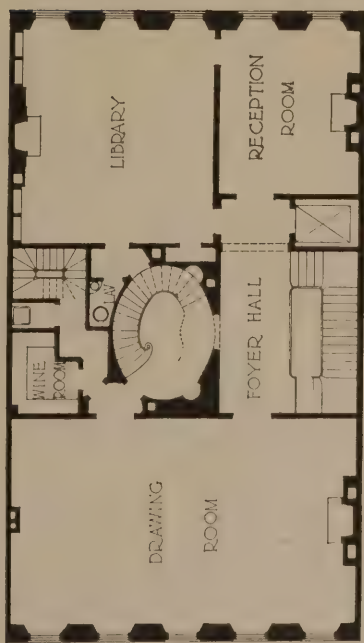
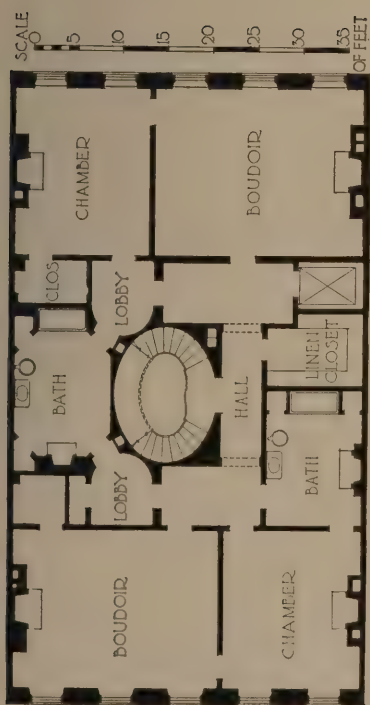
SECOND FLOOR PLAN

HOUSE OF MRS. W. K. VANDERBILT, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT







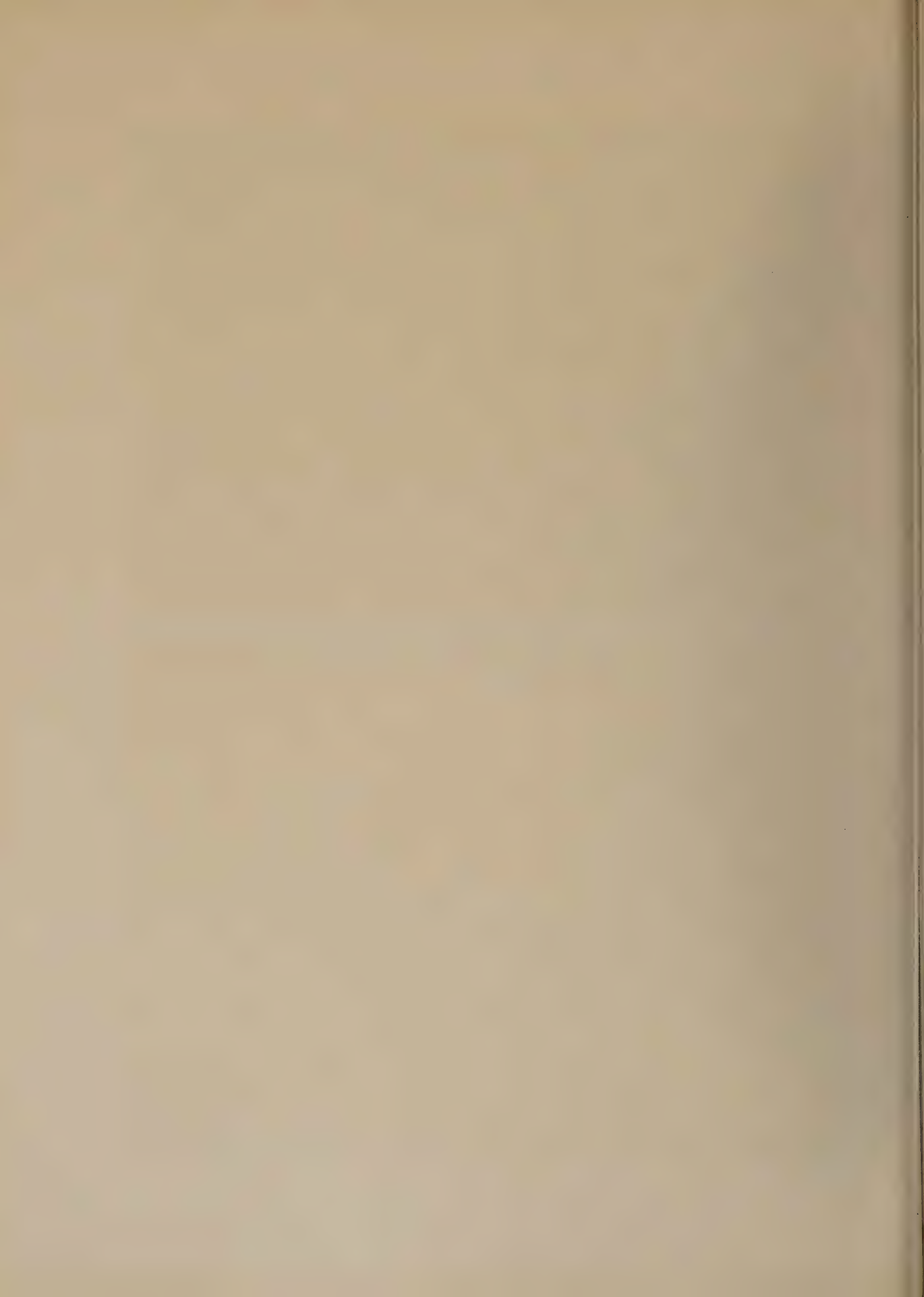


HOUSE OF MISS ANNE MORGAN, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT

GARDEN FRONT WITH ENTRANCE ON TERRACE











STEPS LEAD FROM HALL TO DINING ROOM DOOR

HOUSE OF MRS. W. K. VANDERBILT, NEW YORK

MOTT B. SCHMIDT, ARCHITECT



PAINTED DECORATION ADORNS THE WALL OF THE STAIRWAY

HOUSE OF MRS. W. K. VANDERBILT, NEW YORK

Photos, Kenneth Clark









ANTIQUE PAINTED DOOR FROM HALL TO DINING ROOM

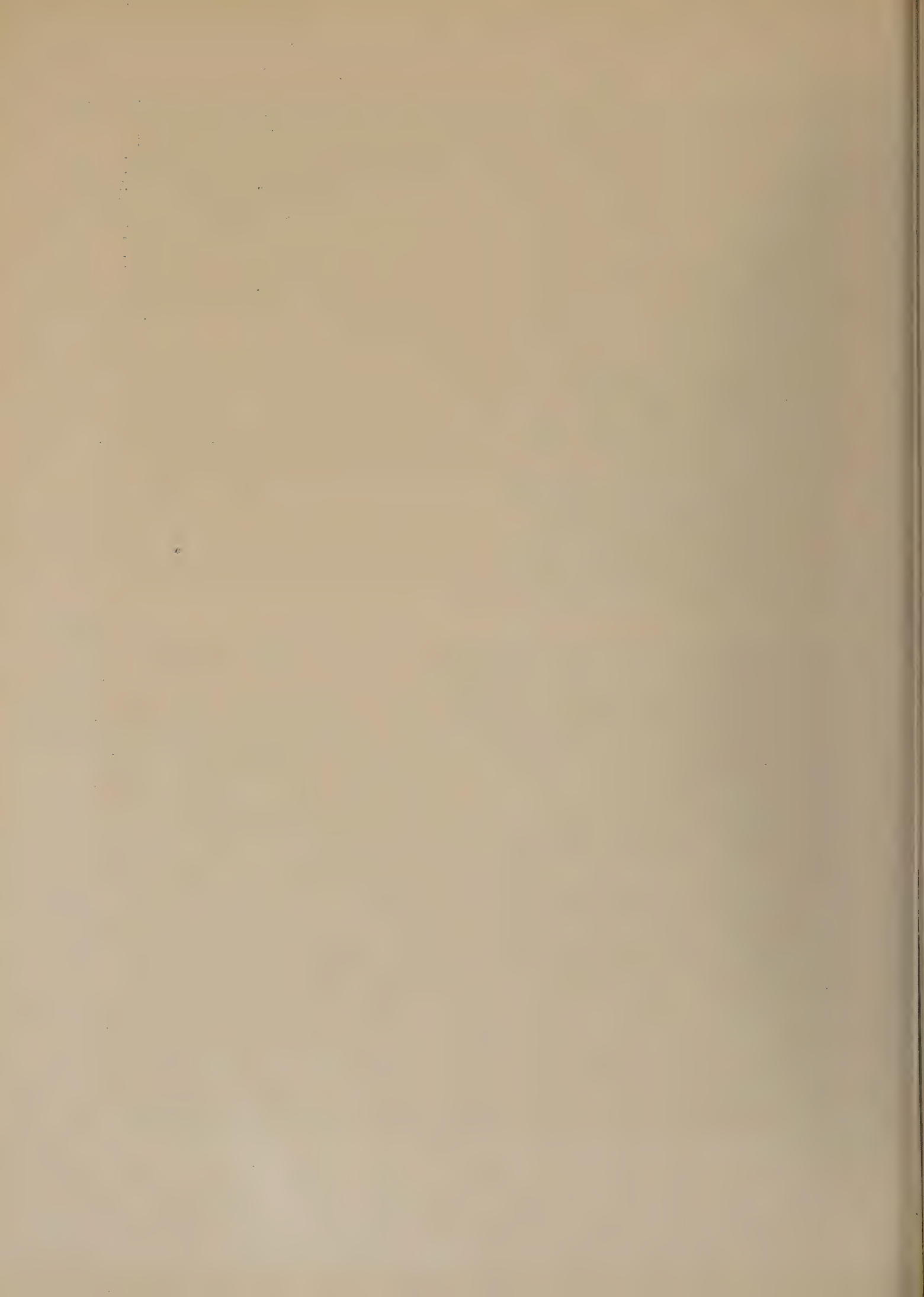
HOUSE OF MRS. W. K. VANDERBILT, NEW YORK

MOTT B. SCHMIDT, ARCHITECT



FIREPLACE AND OVERMANTEL DECORATION IN DINING ROOM



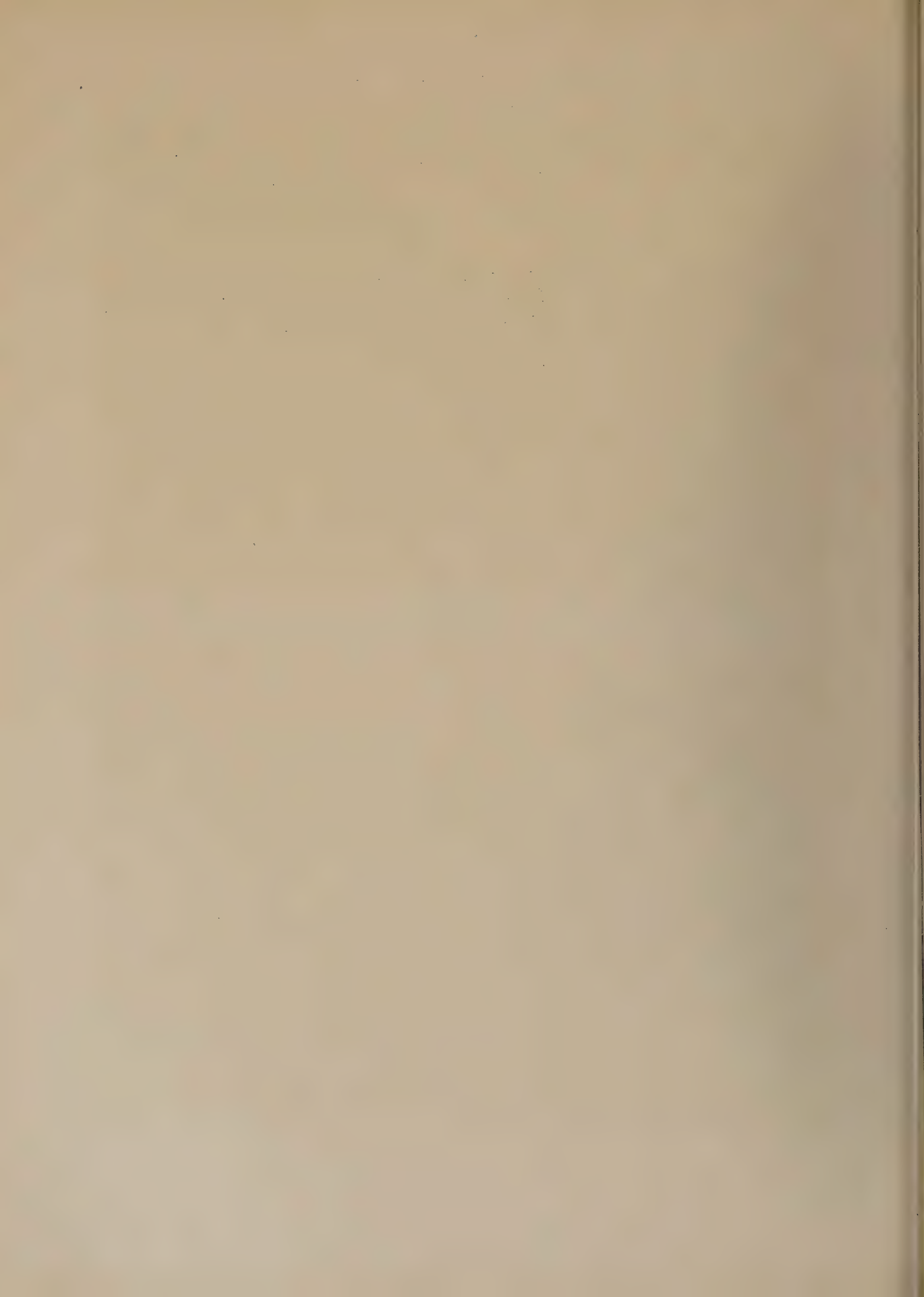






EAST FRONT WITH TERRACE AND GARDEN GATE  
HOUSE OF MRS. W. K. VANDERBILT, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT







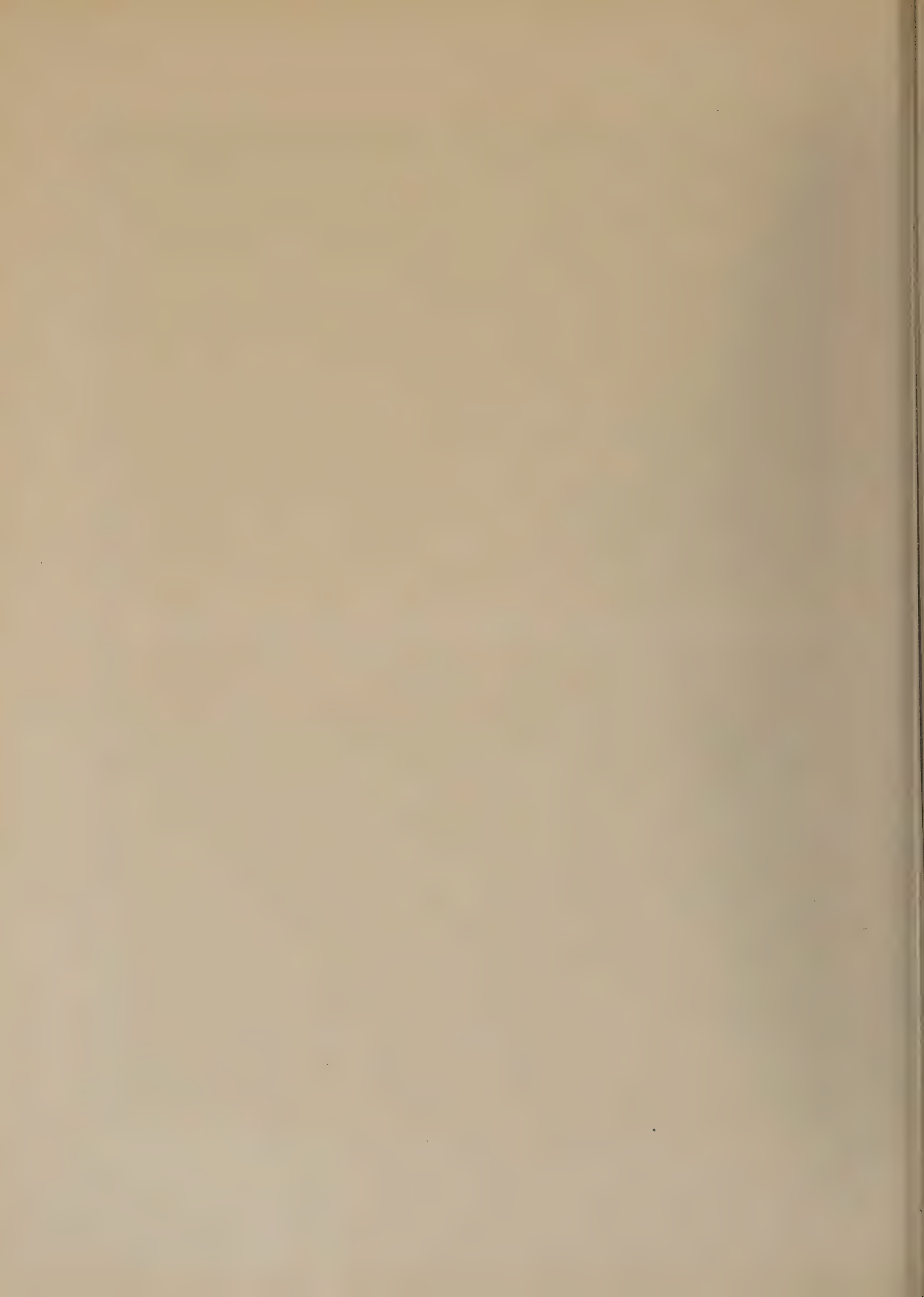


COLONIAL SIMPLICITY AND DIGNITY MARK THE DINING ROOM



GLASS CLOSETS FLANK THE FIREPLACE IN THE WEST BOUDOIR  
HOUSE OF MISS ANNE MORGAN, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT







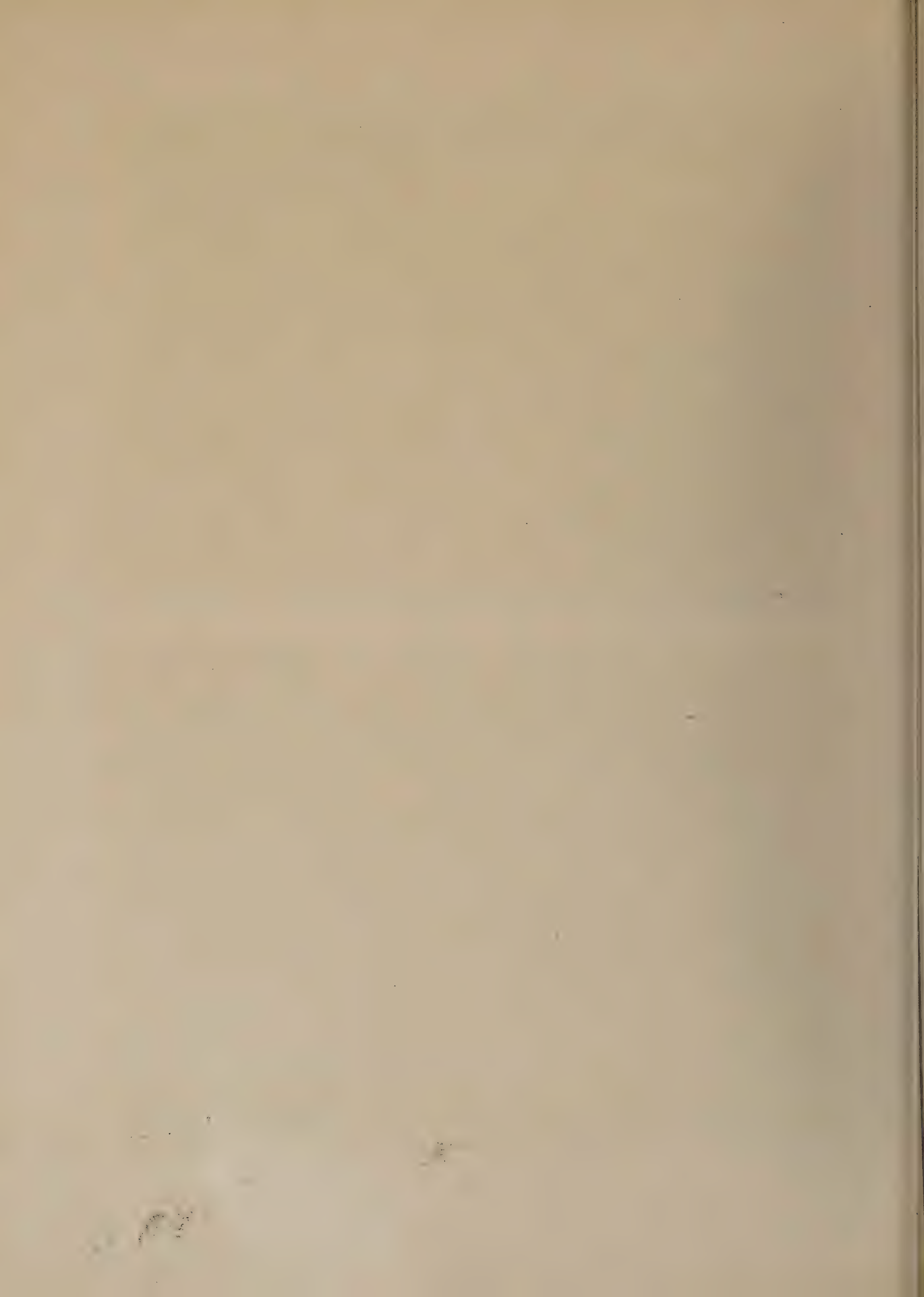


COMFORTABLE CORNER IN THE LIBRARY SHOWING BOOKCASE  
HOUSE OF MISS ANNE MORGAN, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT



RECEPTION ROOM HAS CHINESE CHIPPENDALE WALL PAPER AND MIRROR









WOODWORK FROM AN OLD ENGLISH ROOM ADDS INTEREST TO THE LIBRARY



OLD GEORGIAN PANELING IS USED IN MISS MORGAN'S OFFICE  
HOUSE OF MISS ANNE MORGAN, NEW YORK  
MOTT B. SCHMIDT, ARCHITECT







# The Evolution and Development of Jackson Heights

ANDREW J. THOMAS, ARCHITECT

IN commercial architecture there has long been established the rule that business shall govern design. But old as the rule is, it is strangely misunderstood in practice. Too often people think of it as implying an underlying conflict between architecture and business, requiring the sacrifice of architecture, whereas it really means the intelligent coöperation of both, guided by the simple, common sense principle that architecture should serve the needs of the case. In some circles it is assumed that the architect takes too little interest in safeguarding profits in his design, and that he seeks expensive decorative effects which, if the business man did not forbid, would endanger the financial success of the building. How often do we hear a business man tell how "he had to keep his architect down on the earth in order to make the work a success!"

But the time has come to realize that there are two sides to this controversy. This fault finding has lasted so long that it is becoming hackneyed. The whole point of the matter is that the business man may be just as unbusinesslike in real estate as he claims the architect to be. It is time to establish the opposite truth, which is that the architect who lets his imagination carry him too far from the conditions of the problem is nowadays offset by the business man who has too little vision to make the most of his opportunity, who is unprogressive, and who sticks to customs, blindly following old practices without a thought as to whether these practices are sound or as to whether changing times have made them in any respect obsolete. This is not said to provoke further controversy, but only to show that the criticism of architects as being unbusinesslike is too often made thoughtlessly, and as thoughtlessly accepted. One may even assert that architects have been somewhat too humble in accepting such criticism, to the injury of business as well as of architecture. It may not be the part of the architect to instruct the business man, but he can certainly bring imagination to bear in giving effective form to business ideas; and, what

is also important, he can cultivate sufficient knowledge of business principles to be able to recognize the possession or lack of them in his clients, and to seek the type of client who has business vision to couple with his own artistic imagination. As already suggested, what is needed in commercial architecture is coöperation, and coöperation means, not a one-sided, thoughtless dictation by the business man, but the active participation of the architect in the project, working in harmony with his client.

It is important to understand that business vision

is more essential in real estate than in many other fields. Some products, like food or clothing, are soon consumed and cater only to the wants of the day, but a commercial building is produced for use during a score of years or longer, and requires the finest possible business judgment in foreseeing future trends and in anticipating them in design in order to prevent too rapid obsolescence. The financial success of a building, therefore, may depend more on market conditions of future years than on the market today.

It is in this foresight that the real estate world has been too deficient. Indeed, the architect may

even claim that some of the principles which he introduced into architecture in the last half century have proved to be sound business as well as good architecture. When, years ago, the architect first insisted on the careful planning of American buildings, he opened up a field of vast economies in cutting out waste space and in efficient use of the space provided. When the architect preached sound construction and durable materials, he did not do so solely to obtain decorative appearance, but also to enhance value by making buildings endure, by holding their attraction for tenants, and by reducing depreciation; and lastly—which is the point most in controversy—if the architect has fought for beautiful form and craftsmanship, he has only anticipated the time when the increasing wealth and cultivation and appreciation of the finer sides of life among the American people will be lifting them out of the



Entrance Gate to Garden of "The Towers,"  
Jackson Heights, New York





Street Facade and Garden Entrance



Center Fountain and Seats in Garden

"The Chateau," Jackson Heights, New York

ugliness and baldness of the Victorian era into a more urbane period when, to put it bluntly, they take pride in a good appearance in their buildings and their streets and their neighborhoods, and will pay well him who satisfies their demand. Whenever he has disregarded these sound principles, the realtor has been the creature of habit, opposing progress and new ideas.

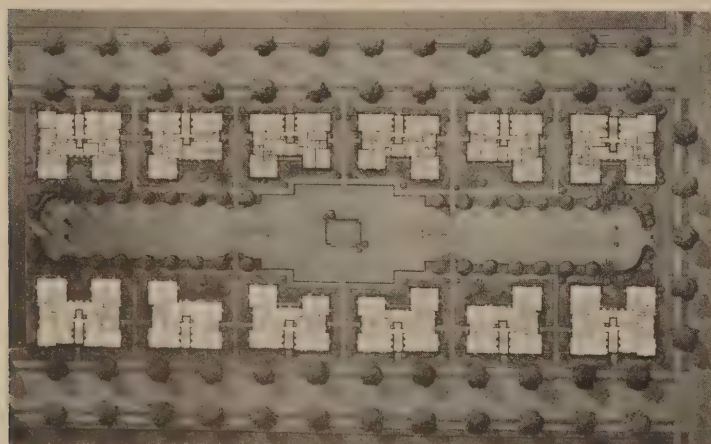
To some extent, at least, the American architect can claim that he has contributed to the business side of commercial architecture. He has in many respects understood the buyer's wants better than the business man. His contribution is only beginning, and it will grow greater as his experience increases in scientific analysis and in expert design.

The best illustrations of the correct principles of commercial architecture may perhaps be found in the apartment house field. These illustrations, moreover, occur alongside older and less businesslike methods, and as a result a most instructive set of examples is now available for comparison.

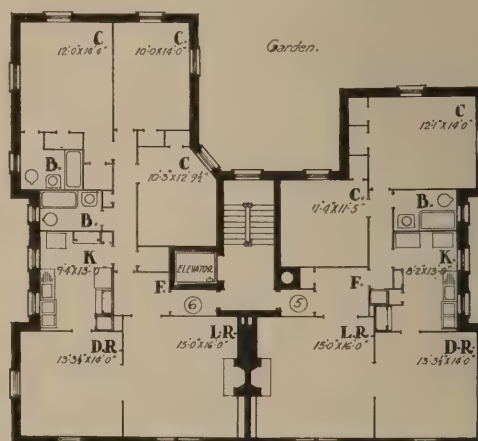
One may assert that, except for a very few isolated cases, apartment house architecture did not share extensively in the remarkable progress made in other classes of buildings during the last 40 years.

Even the most luxurious types of tall elevator apartments showed only a superficial progress, mainly confined to interior decoration and better architectural facades. In fact one may visit one of the best of the old 1890 elevator apartments, and, except for an old fashioned, somewhat "Victorian" appearance, one will find it not essentially different from buildings built since the war. The non-elevator apartments also have had little improvement during the same period, except for the increasing use of a wide frontage, although recently there has been some response to the new architectural ideas expounded by Andrew J. Thomas. Of what other types of buildings could the same be said? In contrast to the unprogressiveness of apartment house design, what a change has been wrought during this same period in the American individual house, the school, the library, church, railroad station, office and store buildings!

Only since the war, around New York have there been signs of awakening. Unfortunately, a good deal of this improvement has been superficial. Much is heard of "talking points," chiefly in the shape of minor details of finish and of bathroom and of kitchen equipment. As an example, in many



One End of "Chateau" Group Land is Reserved for Other Buildings



Typical Middle Unit, "The Chateau"





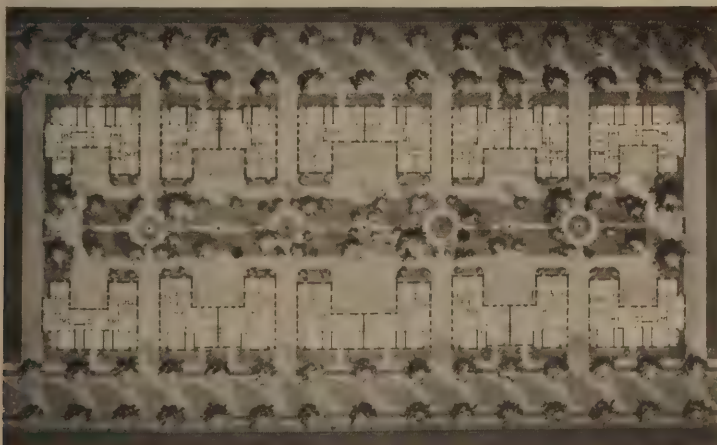
Garden Terrace of "Linden Court"

of the "walk up" apartments of the cheaper type in Greater New York one sees a lavish use of marble wainscoting in entrance halls, of tile floors in upper corridors, of tile wainscots in bathrooms, and of tile floors and wainscots in kitchens. This expensive finish goes along with a large outlay for equipment. At the date of writing, a large group of very cheap small one-family, 6-room brick houses is being put on the New York market, each house saddled with an uncalled-for expense of over \$1,000 in the shape of finish of the kind described, and having, in addition, a wall paneling of stiles and rails applied over the plaster walls in the downstairs rooms, five ceiling electrical outlets in the dining room plus four wall brackets, and in the bathroom a separate tile shower compartment besides the tub. Incidentally,



Italian Influence Is Evidenced in "The Towers"

the main stairs are so steep that one can hardly use them. Such expensive details belong to the very largest mansions, and their lavish use in commercial architecture is the sort of thing for which formerly an architect would never have been pardoned had he introduced them into this class of low priced housing. Yet the speculators who put up such structures claim to "know the market," and they make a great to-do over such incidentals as "talking points" in salesmanship. Of course, the real fact is that these "talking points" are put forward to dazzle an ignorant class of buyers and to distract their attention from the real situation, which may be that the same houses, despite their extravagant finish, are deficient in the real essentials of sunlight, outdoor exposure, garden outlook, proper planning of rooms, elimina-



Both Ends of "Linden Court" Land is Reserved for Other Buildings



Garden Detail, "Linden Court"





One Unit of "Linden Court," Jackson Heights, New York

tion of waste space, and in sound, durable, structural materials. One hears "modern conveniences" extolled on all sides, yet what modern conveniences can supplant the ancient conveniences of sunlight, fresh air and garden?

It needs little argument to prove that, wherever such crude practices are common, they are bound to fail in the long run, especially after the boom and the existing sellers' market have disappeared. Structures of this type, of which there are countless

examples, will not hold their values for many years in the face of the awakening education of the public to better housing standards. What the unprogressive investor fails to consider is the big educational movement in favor of better homes which is going on.

Anyone in the publicity field knows that the American people seem to have an unquenchable thirst for new ideas in homes, whether viewed from the angle of architecture, of landscape architecture, interior decoration or house furnishing. A number of powerful national magazines of huge circulation like *House & Garden*, *House Beautiful* and *Good Housekeeping* specialize in this field, and popular pub-

lications devote immense space to it. There are also the Architects' Small House Service Bureau and the educational work of the United States Government, universities and other public spirited agencies. This vast propaganda is bound to have its effect on the buying public, and it is creating a demand for real improvement in housing practices which the speculator must meet. The propaganda goes into the most elaborate detail, and every feature of a house is exhibited and studied for practicality, econ-



Entrance Doors, "Linden Court," Show Fine Detail



Doorways of "The Towers" Show Interesting Grillework



omy, charm and artistic appearance—the real “talking points.” Here is the true market for the housing speculator during the next few years, and he courts disaster if he ignores it.

A very few real estate operators have sensed this demand for progress, and they have cooperated with the architect in meeting it. No better example of sound business policy in regard to architecture can be cited than that of the Queensboro Corporation at Jackson Heights, New York. The Queensboro Corporation constantly studies its market and insists on progress in design. To use the business phrasing which is consciously adopted in this article for purposes of illustration, it believes in improving its product in every way, from the biggest essentials of architecture down to the smallest detail. Each year it brings out new designs and new models and new improvements, in the same spirit of progressive evolution that has characterized the motor industry in its leadership of American business.

Such a program involves a vast deal of work and it requires initiative. It offers the architect a real opportunity, because he is encouraged to progress. His work becomes real expert professional service, instead of incidental draftsmanship. It requires highly coordinated architectural design in the fundamentals and in the relation of building to interior decoration and to the garden. In place of a single flat exterior wall along the street, so characteristic of the stereotyped apartment, the buildings have four exterior walls, with roofs, breaks, projections and other details—in other words, the elevations become a matter of three dimensions, or true architecture, making possible variety in treatment.



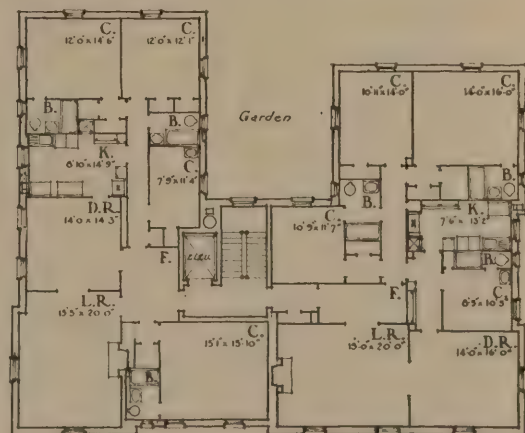
General View of “The Towers,” Jackson Heights, New York

In the process, custom has no mystic sanctity to be obeyed without a question. The truth is that many real estate “customs” will not stand analysis, because they may only register the fact that people have been persuaded to accept a poor arrangement in default of anything better. A case in point is the dictum that the rear apartment and the rear bedrooms will bring less rent than those located on the street front. But Mr. Thomas reasoned that this so-called custom grew out of the fact that the difficulty with rear locations was due chiefly to bad planning, with dark, congested courts and poor outlook; and that a rear location in the midst of a great garden was much superior to one on the street and would bring a higher rent. His view was accepted by the client and has proved correct.

The most radical break with custom came in the adoption of individual buildings in place of a solid mass along the street. Mr. Thomas adopted this innovation in arrangement, because he was able thereby to get more sunlight, more outdoor exposure



Land at One End of “The Towers” Is Reserved for Other Buildings



Typical Corner Unit, “The Towers”



and better outlook, a larger number of rooms, and a more attractive appearance. The new arrangement was first tried out very cautiously as an experiment, on a group of garden apartments, called "Linden Court," built in 1920. In the "Linden Court" group the buildings are placed only 15 feet apart in the narrowest dimension and cover only 40 per cent of the area of the site. The experiment proved a striking success. People welcomed the new idea, and tenants flocked into the buildings in preference to taking apartments in the older solidly built types, a group of which was completed at the same time and which rented more slowly. Encouraged by the success of the experiment, a second group, the "Chateau" apartments, was built in 1922. The most important facts about this second group are that it covered 37.4 per cent of the site, and that the buildings were placed a little farther apart—19 feet, 6 inches. Again the success of the operation emboldened its authors to go much further, and in the "Towers," a group of fireproof luxurious elevator apartments just completed, the



One of the Gardens of "The Towers"  
Noel Chamberlin, Landscape Architect

area occupied is only 36 per cent and the buildings have been placed 36 feet, 8 inches apart. In this architectural evolution the passages between the buildings have developed into real side gardens, opening into the great center garden, and the individual buildings have the effect of being placed in the midst of a garden setting, almost like a country house. Likewise the rear court has almost disappeared from the plan. It will be noted that the individual apartment in the two later groups has been given better outdoor exposure. In the evolutionary process the elevations and every detail of arrangement and equipment have been improved.

This vision and business judgment is characteristic of the Queensboro Corporation's business policy. Their architecture is no capricious experimentation, but a steady, sure evolution, year by year, based on the fundamental principles of imaginative architectural design and business vision. Architecture should welcome such a demonstration, because it sets an example to real estate of real coöperation with the architect in a search for progress.



Interior Garden of "The Towers" Shows Formal Arrangement



# The Smaller Civil Architecture of England

## II. BERKELEY'S HOSPITAL, WORCESTER

By ROGER WEARNE RAMSDELL and HAROLD DONALDSON EBERLEIN

**B**ERKELEY'S HOSPITAL, in Worcester, is not a place intended for the care and healing of sick folk, but a hospital in the ancient sense of the word, a place of hospitality where a limited number of aged, destitute and needy persons may find a comfortable home.

The founder was Robert Berkeley, Esquire, of Spetchley, in Worcestershire, and is described by John Evelyn in his Diary as a man of distinguished parts, "curious in gardening." By his will, dated December 13, 1692, Robert Berkeley devised certain funds to be applied to the foundation and support in perpetuity of an establishment of almshouses in Worcester for "12 poor men and one poor woman." Why this whimsical apportionment of one lone woman to 12 of the sterner sex, history does not record. The administrators of the charity later increased the number of men to 14. Besides the 13 pensioners originally designated as beneficiaries of this bounty, there was to be also a chaplain with a stipend of £20 a year. A steward was likewise to be appointed to administer the affairs of the Hospital, receiving the same compensation as the chaplain. The control and management of the founda-

tion were vested for all time in the Mayor, Aldermen and Town Clerk of the City of Worcester.

In 1705 land was purchased in the Foregate, near Worcester Cross, and some time thereafter work was begun on a group of buildings comprising a chapel, lodgings for the chaplain and the steward, and two rows of small dwellings facing the courtyard, for the pensioners, in which they might live independently one of another, maintaining their individual privacy. Just when the buildings were completed is not certainly known, but as there is record among the old accounts of the vault beneath the chapel being let at Lady Day, 1711, to a wine merchant for storage purposes, all construction was presumably finished in 1710, if not before.

The architect of Berkeley's Hospital is not known. If there was indeed any architect at all, we can only conjecture who he may have been; if he supplied the original design, it appears from existing evidence in the fabric itself that he must have left the carrying out of the work without supervision and altogether in the hands of the master builder, who seems to have been lacking either in the matter of conscientious oversight or else in experience. Other-



Houses of the Chaplain and Steward Flank the Gateway





ENTRANCE DOOR TO ONE OF THE PENSIONERS' HOUSES

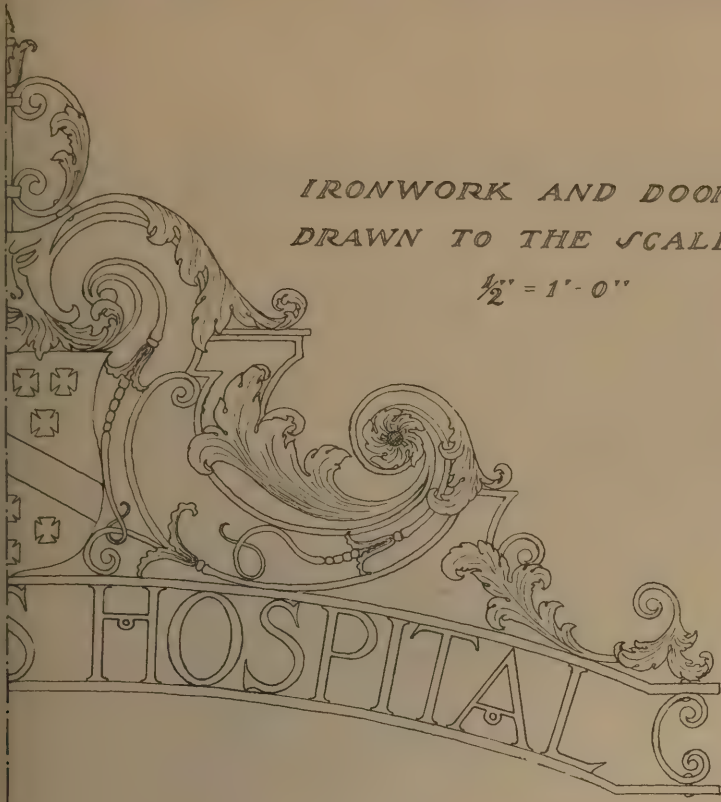
BERKELEY'S HOSPITAL, WORCESTER, ENGLAND



AT THE END OF THE COBBLE-PAVED COURT IS THE CHAPEL

IRONWORK AND DOORWAY  
DRAWN TO THE SCALE OF

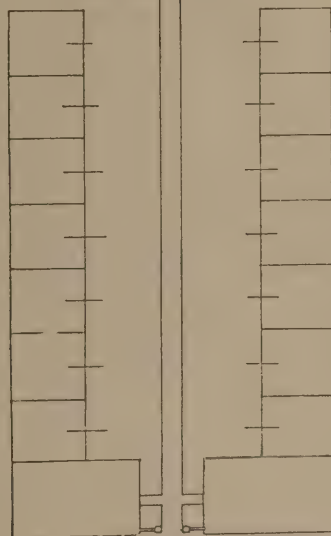
$\frac{1}{2}' = 1' - 0''$



PROFILE OF DOOR JAMB  
SCALE  $\frac{1}{4}$  FULL SIZE

PLAN OF GROUP SCALE  
 $\frac{1}{2}' = 10' - 0''$

BASE  
COURSE  
 $\frac{1}{8}$  FULL SIZE



BERKELEY'S HOSPITAL  
WORCESTER



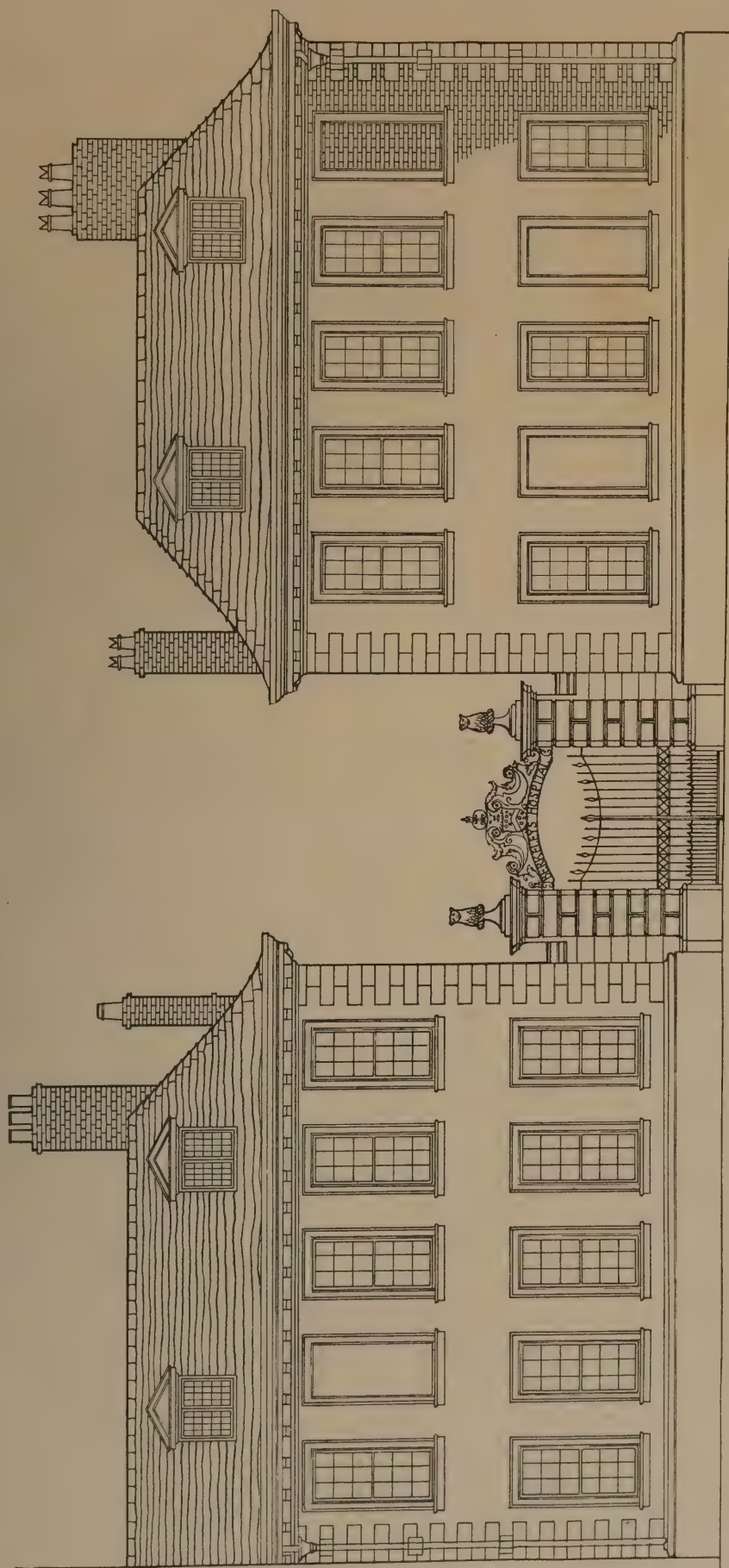


GRACEFUL CRESTING SURMOUNTS THE ENTRANCE GATEWAY

BERKELEY'S HOSPITAL, WORCESTER, ENGLAND



OVER THE DOOR TO THE CHAPLAIN'S LODGING, ORNAMENT FILLS THE PEDIMENT



SCALE  $\frac{1}{16}'' = 1'-0''$

# BERKELEY'S HOSPITAL WORCESTER



wise it is hard to account for the patent disparity in the height of the gateposts and certain other features that are obviously awry, and awry not because of any exigencies of plan, any settling of foundations, any intentional subtlety, or any of the lines of the plot on which the Hospital stands. These little indications of slovenliness in construction (it is impossible to find a more euphemistic name for them) along with some settling of the foundations here and there so that the walls in several places are visibly out of plumb, made it extremely difficult in more than one instance to compose photographs that would not look painfully askew.

Notwithstanding the constructional shortcomings just noted, which after all lend a peculiarly piquant individuality to the ensemble, just as the irregularities of the human face often enhance its interest, Berkeley's Hospital possesses both distinction and charm in large measure, combined with the impressive force and virile accent so generally characteristic of civil and domestic architecture alike at the date of its erection. On each side of the gateway, with its camels' heads and its gracefully fashioned wrought iron "overthrow" or cresting, are the respective lodgings of the chaplain and the steward.

Between the houses of these two officials a broad pathway gives access to a wide, cobble-paved court on which face, from opposite sides, the little one-story houses of the pensioners, while at the far end, is the chapel with an effigy of the founder in a niche.

Each pensioner's house consists of a single large room, so arranged, however, that it is virtually in two easily separable parts—a sleeping cubicle and a living room. Each pensioner does his or her own cooking and housekeeping, so that there is no occasion for a refectory. The plan of the group is both agreeable in point of composition and convenient for the general purposes of administration as the Hospital is organized. The whole group is built of the red face brick, in such esteem in Queen Anne's day, of a very rich, yellow hue, and all trim except the cornices is stone. What the stone is it is impossible to say as it is covered with many successive coats of buff paint. The greater part of the original glazing has been replaced and the old robust bars and muntins have given way to sash construction of a rather weak type. The aspect of the pensioners' houses has been much altered in recent times by the substitution of leaded quarry glazing for the sashes formerly used.



The Entrance Doors to the Houses of Chaplain and Steward Are Inside the Gateway

# Spanish Influence at Palm Beach

THE HOUSES OF ADDISON MIZNER AND DR. W. S. KINGSLEY

ADDISON MIZNER, ARCHITECT

ARCHITECTURE, like plants and trees, should be indigenous to the soil from which it springs. That is to say in plan and elevation it should suit the climate and the scene of its environment. Fortunately, this most important trait, suitability of design, is being considered and carried out to a much greater extent today than ever before. Thus in southern California, already replete with Spanish tradition, the Italian and Spanish styles are being used more and more consistently and generally. As Florida has much the same climate as Santa Barbara and Pasadena, although lacking the romantic background of the Spanish missions, the architecture of southern Europe is equally suitable there.

Among the many examples of the use of Spanish architecture in Florida, two houses at Palm Beach recently designed and built by Addison Mizner, Architect, show the possibilities of this picturesque style. Imagination and artistic appreciation are strongly indicated in the designs of both of these houses, not only in the elevations but in the plans also, which are similar in general treatment. Each shows a rambling arrangement of rooms around two sides of a patio. Each has a large loggia or room open on two sides, separating the living room

from the dining room and service wing. The topography of the site of Mr. Mizner's house, which is the smaller of the two, permits a main entrance and garage on a lower level than the living rooms and gardens, adding much to the picturesque irregularity of the design. In size as well as in detail Dr. Kingsley's house is more pretentious, more the Spanish villa than the farmhouse type. Its entrance drive, following the high garden wall on one side, and its ornate entrance door with open balcony above, are dignified and imposing. The long, low roofs of variegated tile carry the eye far back over the patio wall, above which beckon the waving leaves of scattered palm trees. The patio, which faces east, is shut in on one side by the wall of the entrance drive, and on the other by the buildings and courtyard wall of the service wing, giving it the quiet seclusion and indefinite charm of an old Spanish enclosure.

A broad grass terrace, broken by trees and palms of varying kinds, extends across one end upon which opens the loggia with its triple arches and low steps. An interesting wall of marble and open tile grillework separates this upper patio terrace from the lawn below. The several angles of the east side of the house, with its many arched and square-

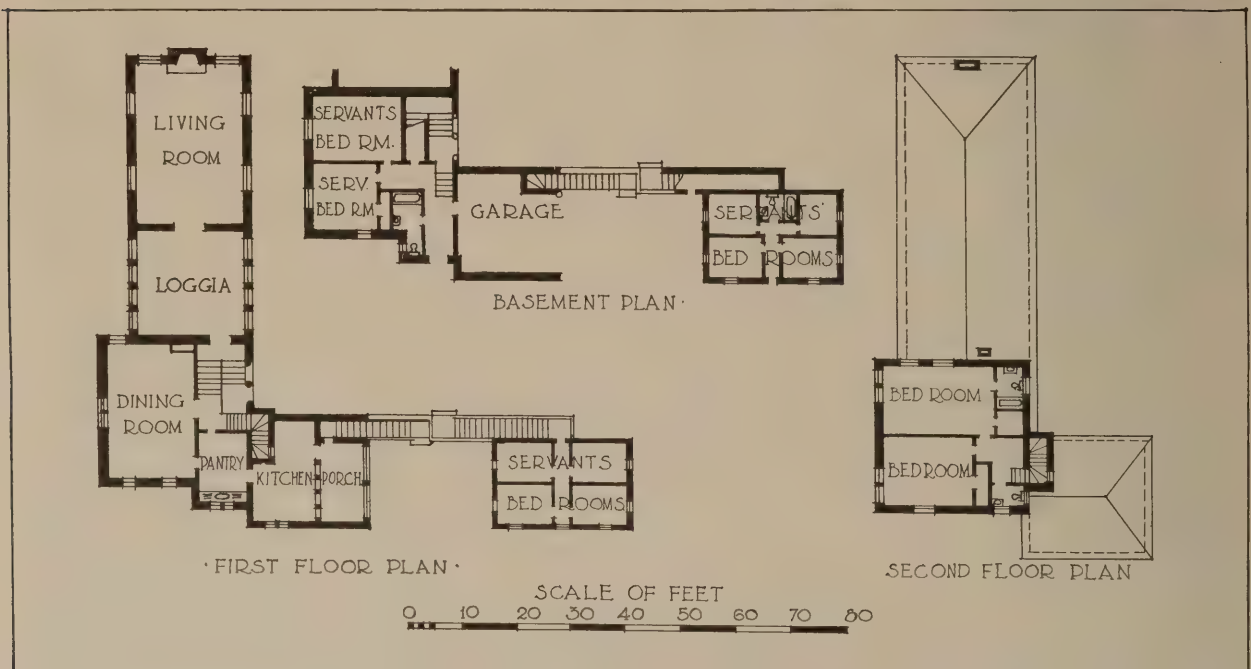


High Walls Separate the Entrance Drive from the Patio of Dr. Kingsley's House





OLD TREES SHADE THE ENTRANCE DRIVE TO MR. MIZNER'S HOUSE

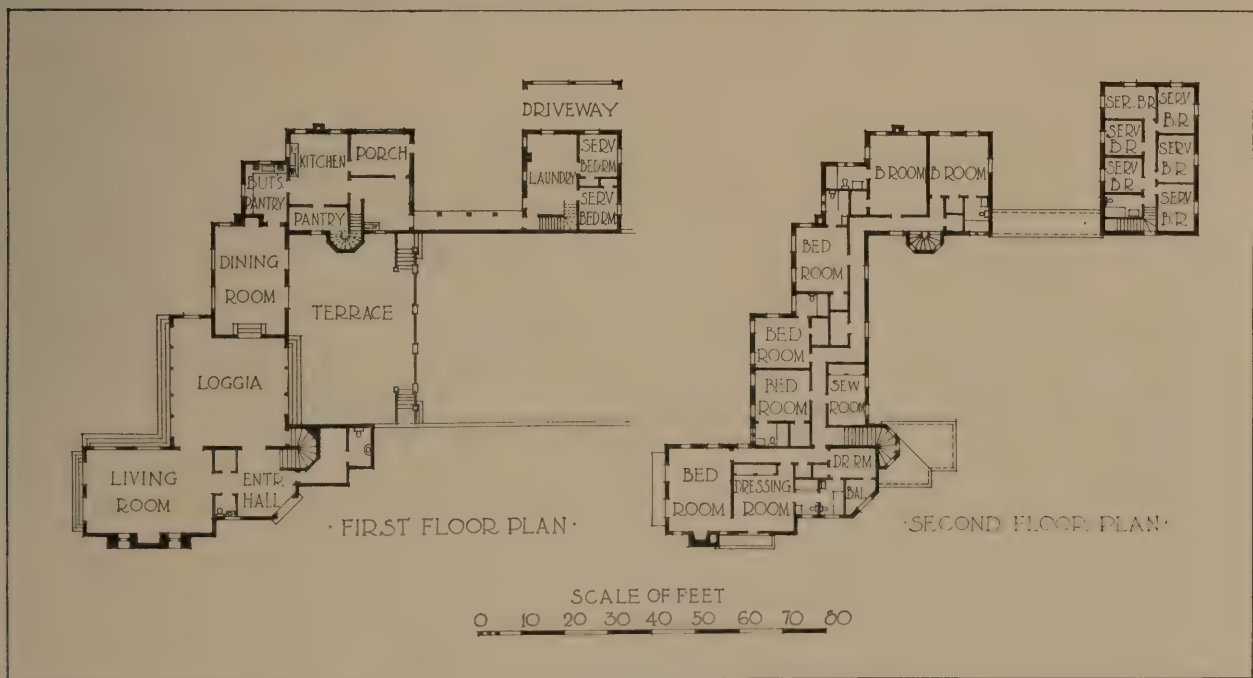


FLOOR PLANS

HOUSE OF ADDISON MIZNER, PALM BEACH  
ADDISON MIZNER, ARCHITECT



SERVANTS' QUARTERS IN DR. KINGSLEY'S HOUSE OPEN ON A COURTYARD



FLOOR PLANS  
HOUSE OF DR. W. S. KINGSLEY, PALM BEACH  
ADDISON MIZNER, ARCHITECT



topped windows looking out upon the ocean, give opportunity for a pleasant play of alternating sunlight and shadow. The various breaks of this elevation also indicate and coincide with the plan of the interior, each bay representing a room. A few steps lead through a richly decorated entrance doorway into a corner hall from which winding stairs connect with the second floor. From this hall doors open into the living room and the great loggia room, 25 by 28 feet. From this room more steps lead up into the dining room and service wing, with its large pantry, kitchen and servants' hall. A covered walk 26 feet long connects the servants' hall with the service building, which contains besides a laundry and eight servants' rooms and bath, a large garage opening onto a lower level. A courtyard is formed by the service buildings and the covered walk, to which access is had through an archway in the servants' dormitory and laundry building. This isolation of the servants' quarters, always desirable where space and plan permit, recalls a similar arrangement found in most of the large Colonial mansions of the South, such as Mount Vernon, Westover and Homewood. The second floor of the main house contains seven master bedrooms, each having a separate bath and large clothes closet. Rough plaster walls, tile floors and narrow trim contribute to the severe simplicity of the interior of Dr. Kingsley's house. The walls of the loggia are laid up in stone, which treatment, together with the tiled floor and light wicker furniture, gives this

connecting room the semblance of a porch. Curtained arches on the west lead out to the patio terrace and on the east to the ocean beach. The walls of the living room are paneled in wood, so divided that a number of old portraits could be set into some of the panels. The stone mantelpiece, which is more Italian than Spanish in design, shows a simple architecture and entablature of carved mouldings.

The main entrance of Mr. Mizner's own house, which together with a garage and two rooms and bath for servants is on a grade lower than the living rooms and patio, is approached by a shaded and winding drive. Trees of many kinds and picturesque shapes add greatly to the artistic effect. Stone stairs with iron rails lead from the entrance up to the loggia, and continue on to the dining room, which together with the service wing is on a still higher level. The two floors of the servants' building, which in this case is entirely detached, containing eight rooms and a bath, are reached by flights of steps, one up and one down from the level of the kitchen and servants' porch. Only the entrance bay of this interesting house is carried up an additional story, where two master rooms with baths are located. The patio, with its trees, marble benches, and plants in large Spanish pots, is very attractive, making a pleasant approach to the long flight of terraced steps leading down to a marble fountain.

In these two houses, although differing in plan and detail, Mr. Mizner has succeeded in reproducing much of the charm of the villas of southern Spain.



Dr. Kingsley's House Shows Many Angles and Windows on the Ocean Side





TREES GIVE A PICTURESQUE QUALITY TO THE EASTERN SIDE OF THE HOUSE



THE PATIO AND TERRACED GARDEN HAVE THE APPEARANCE OF AGE  
HOUSE AT PALM BEACH

*Photos, F. E. Geisler Studio*

ADDISON MIZNER, ARCHITECT AND OWNER







A LARGE FIREPLACE DOMINATES ONE END OF THE LIVING ROOM



THE DINING ROOM HAS THE CHARM AND ATMOSPHERE OF SPAIN  
HOUSE AT PALM BEACH  
ADDISON MIZNER, ARCHITECT AND OWNER





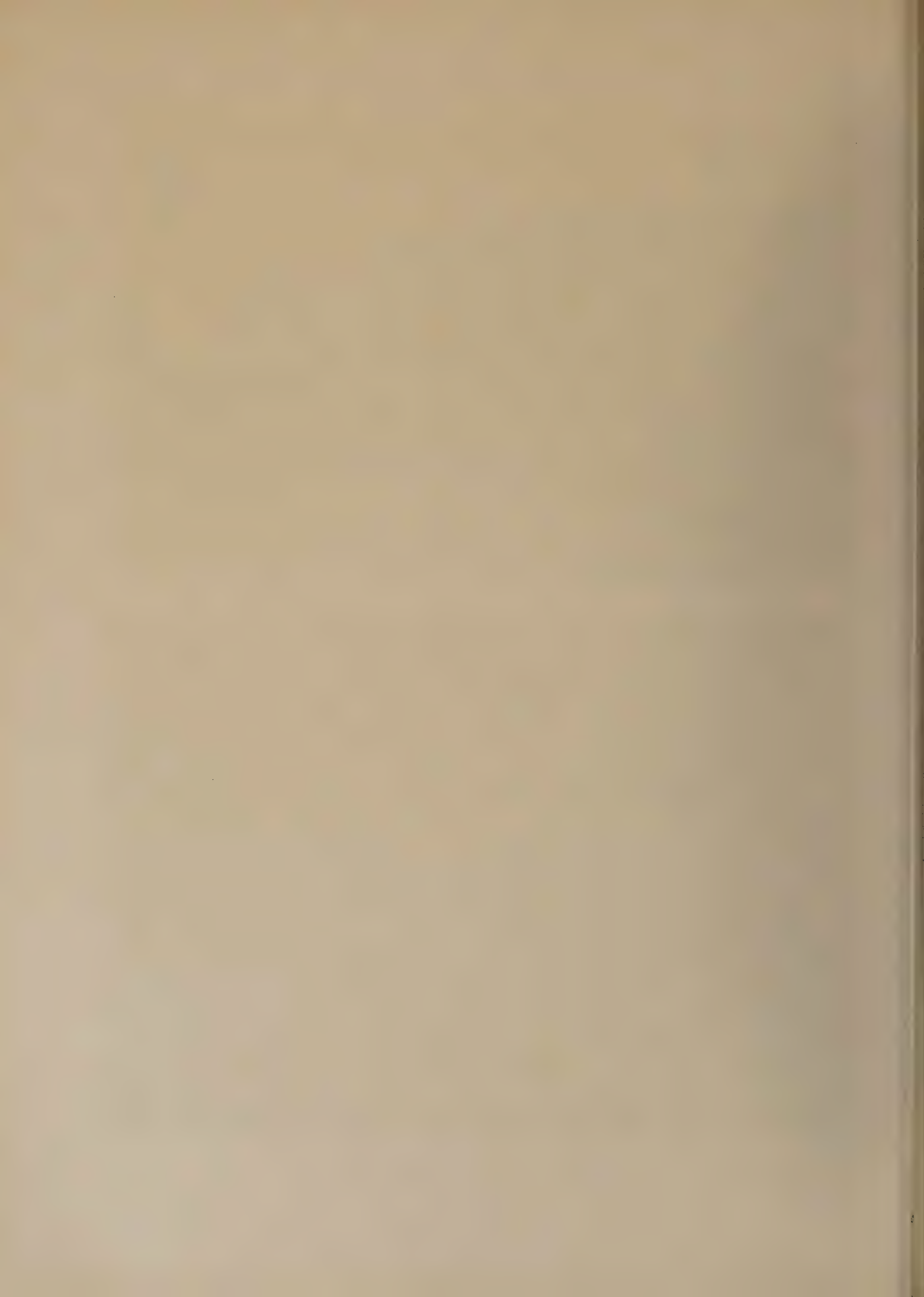


WINDING DRIVES LEAD TO THE ENTRANCE DOOR



HIGH WALLS ENCLOSE THE PATIO ON THE UPPER TERRACE  
HOUSE OF DR. W. S. KINGSLEY, PALM BEACH  
ADDISON MIZNER, ARCHITECT







THE LOGGIA IS SPACIOUS AND AIRY



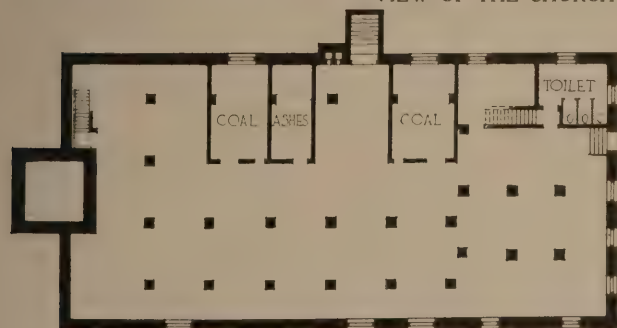
THE DINING ROOM, LIKE THE LOGGIA BEYOND, HAS A TILE FLOOR  
HOUSE OF DR. W. S. KINGSLEY, PALM BEACH  
ADDISON MIZNER, ARCHITECT



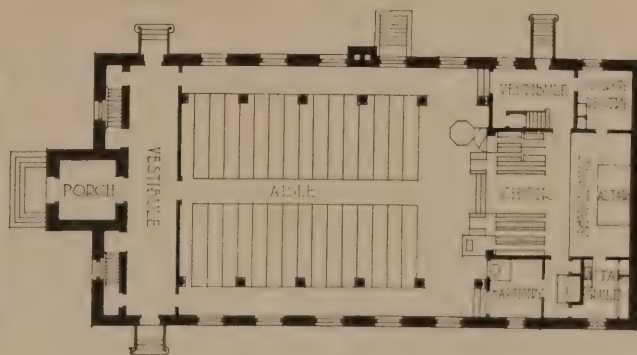




VIEW OF THE CHURCH FROM THE MAIN STREET



SCALE OF FEET  
0 5 10 20 30 40  
BASEMENT PLAN



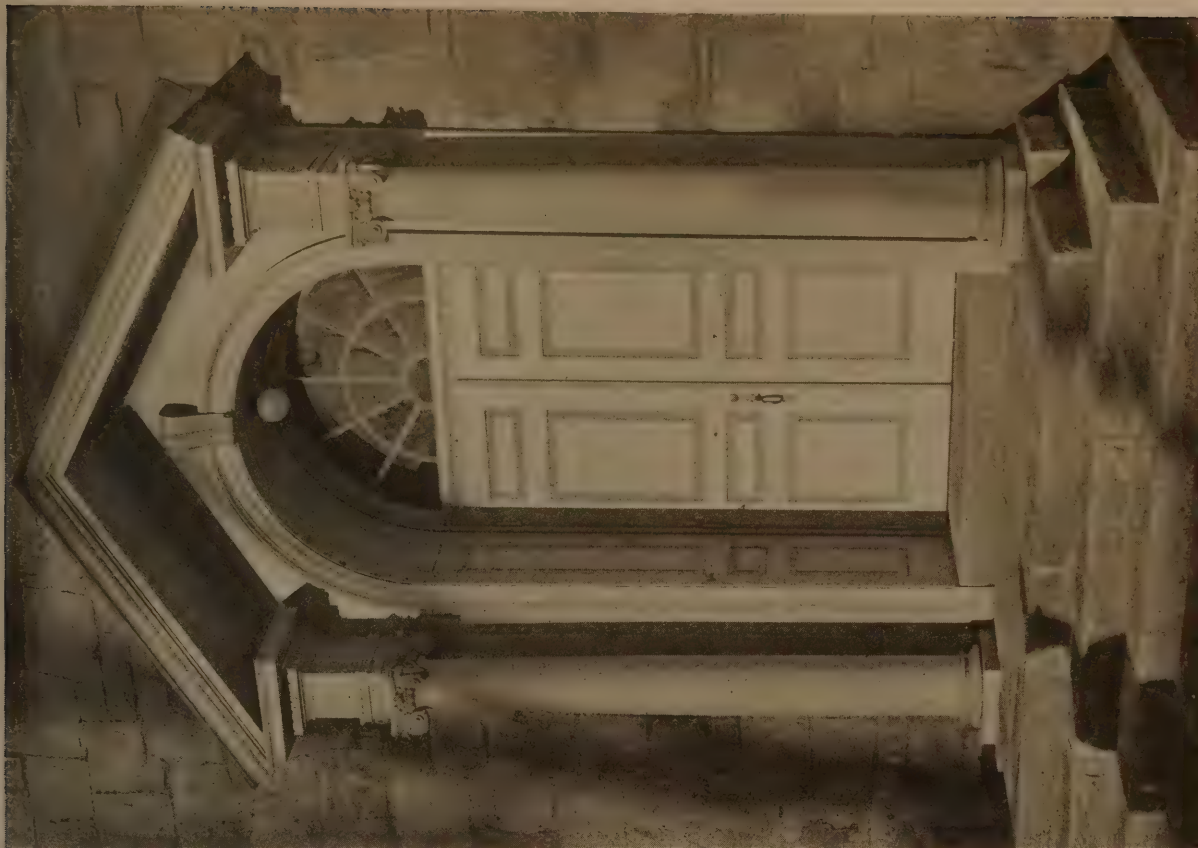
MAIN FLOOR PLAN

ST. PAUL'S CHURCH, NEWBURYPORT, MASS.

PERRY, SHAW &amp; HEPBURN, ARCHITECTS; OFFICE OF R. CLIPSTON STURGIS, CONSULTING ARCHITECT







MAIN ENTRANCE DOOR



SIDE AISLE LOOKING TOWARD THE ENTRANCE

ST. PAUL'S CHURCH, NEWBURYPORT, MASS.

PERRY, SHAW & HEPBURN, ARCHITECTS; OFFICE OF R. CLIPSTON STURGIS, CONSULTING ARCHITECT

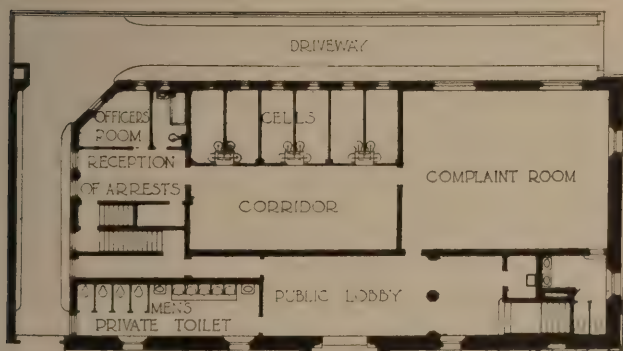
*Photos, Paul J. Weber*



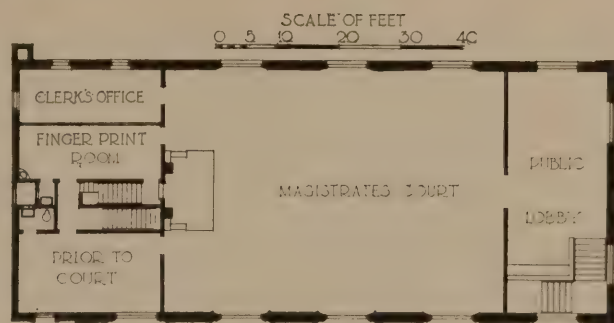




MAIN FRONT ON SECOND STREET



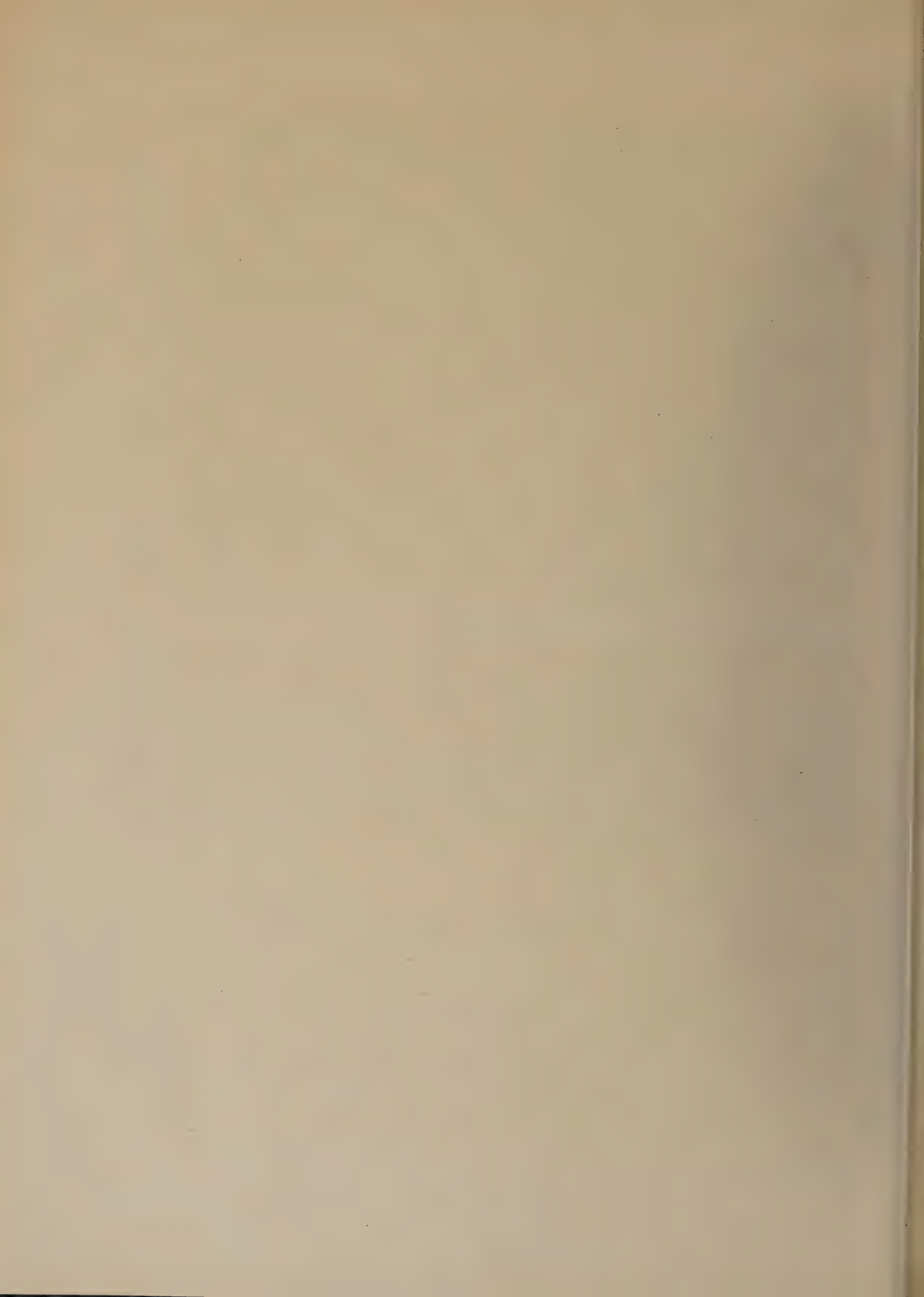
PLAN OF STREET FLOOR

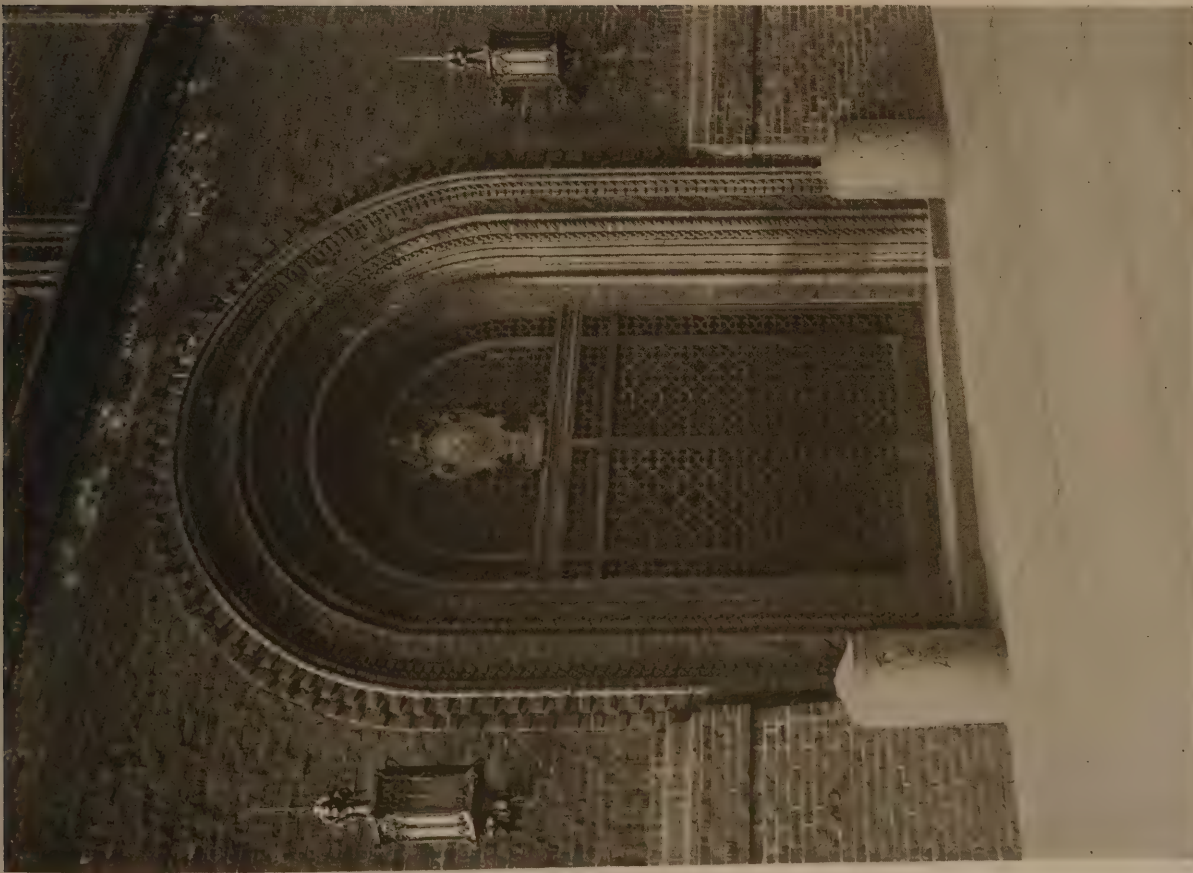


PLAN OF SECOND FLOOR

THIRD DISTRICT COURT, SECOND AVENUE AND SECOND STREET, NEW YORK  
ALFRED HOPKINS, ARCHITECT





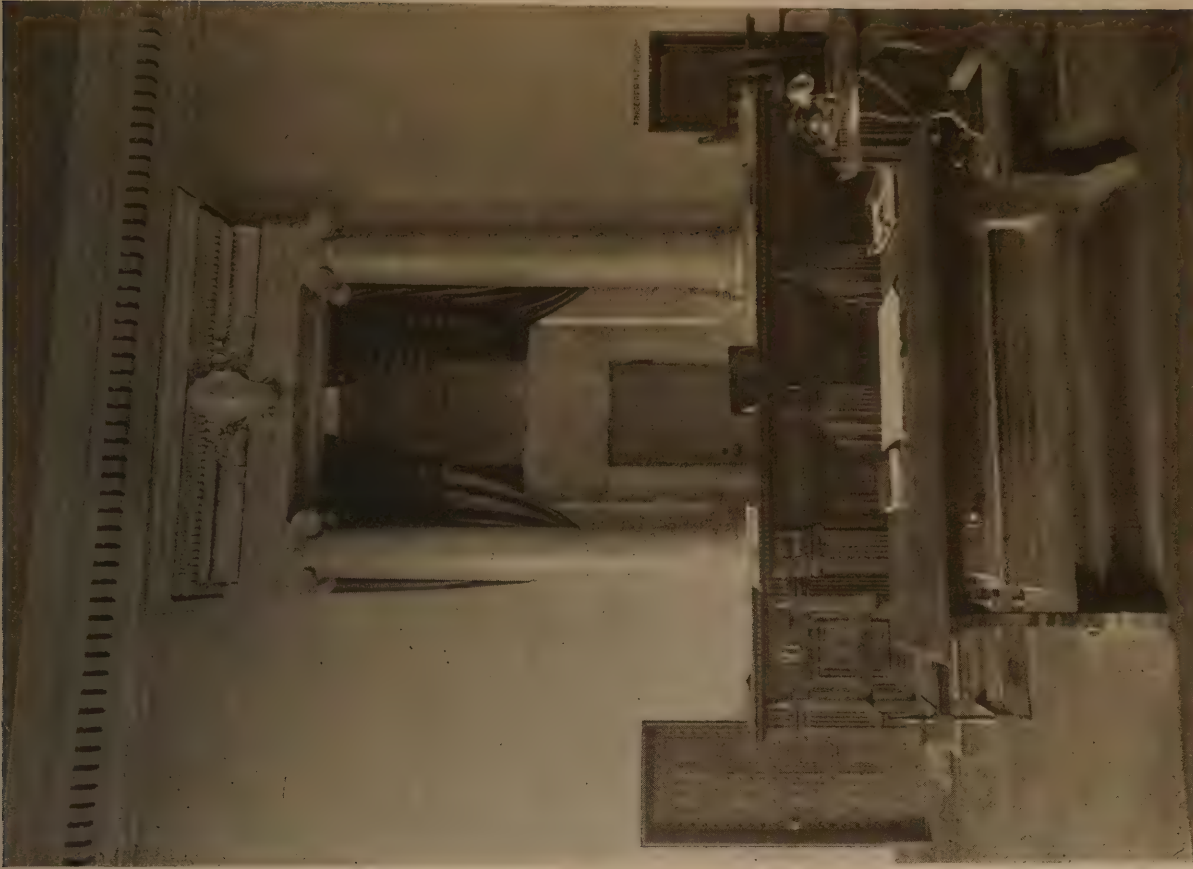


MAIN ENTRANCE ON SECOND STREET

THIRD DISTRICT COURT, SECOND AVENUE AND SECOND STREET, NEW YORK

ALFRED HOPKINS, ARCHITECT

*Photos, John Wallace Gillies*



MAGISTRATE'S DESK IN THE COURT ROOM





# ENGINEERING DEPARTMENT

Charles A. Whittemore, *Associate Editor*

## Use of Composite Columns in Concrete Buildings

By JOSEPH W. PARKER, *Consulting Engineer*

WITHIN recent years the designers of multiple-story buildings have found it advisable to adopt reinforced concrete construction to a greater extent than ever before and for much higher buildings than had previously been thought feasible or economical. The result is that today we have examples of reinforced concrete buildings which are 18 stories in height.

The gradual increase from year to year in the number of stories in buildings of this type introduced a very serious problem which had to be solved before this type of construction could be utilized to advantage in comparatively high buildings. The difficulty which arose was that of extremely large interior columns in the lower stories of a building when such columns were designed of reinforced concrete. The amount of floor space occupied by such interior columns in heavily loaded and high buildings, even when designed for a 1:1:2 concrete mix and heavily reinforced with spiral hooping and vertical rods, was so large as to be prohibitive, and it therefore became necessary to use some other type of column in such cases.

### Structural Steel Columns Encased in Concrete

The type of column that was first used to effect the desired reduction in the sizes of interior columns was a structural steel column encased in a minimum amount of concrete for fire protection. This concrete as a rule had ordinary hooping with a few small vertical rods, and the entire column load was considered as carried by the structural steel column with a moderate increase in the maximum allowable working stresses in the steel column due to the stiffening effect of the concrete casing. The adoption of this type of column resulted in a considerable saving in valuable floor space in the lower stories of high buildings, but a serious objection to

their use was the excessive increase in the cost of such columns over that of the spirally reinforced concrete columns with a rich mixture of concrete. This objection led to the use of the composite column consisting of a spirally reinforced column with a core of structural steel or cast iron.

### Composite Columns with Structural Steel Core

This type of column consists of a reinforced concrete column with both spiral and vertical reinforcement, a rich mixture of concrete, and a core of structural steel. Sections of the various types of cores used are shown in Fig. 1. Type (c) is that most commonly used on account of the economy in the use of a single rolled section and also on account of the facility for making bracket connections, etc. to the core. Type (e), known as the Gray Column, is not suitable for use where beam and bracket connections are necessary.

An important advantage in the use of such columns is that the concrete inside the spiral hooping may be considered as carrying a portion of the total column load, and for that reason is more economical than the type described in the preceding paragraphs. The Joint Committee on Standard Specifications for Concrete and Reinforced Concrete in its Progress Report of 1921 suggests that the concrete within the spiral hooping of such columns be designed for a unit stress of 25 per cent of the ultimate strength in compression, and that the unit compressive stress in the steel section be determined by the formula  $f_r = 18,000 - \frac{70h}{R}$  where  $f_r$  = compressive unit stress

in steel section with a max. value of  $16,000 \text{ #}/\text{sq. in.}$ ;  $R$  = least radius of gyration of steel section in inches;  $h$  = unsupported length of column in inches.

The Joint Committee further suggests that the safe load on a structural steel section which fully

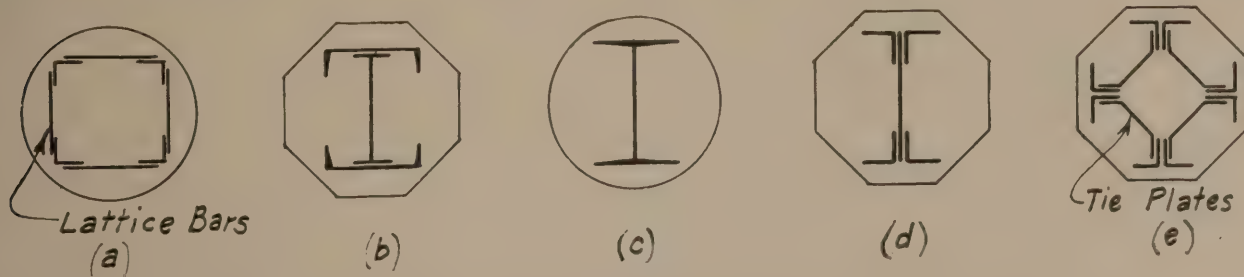


Fig. 1. Sections Showing Types of Steel Cores Used in Composite Columns



encloses or encases an area of concrete and which is protected by an outside shell of concrete at least 3 inches thick be calculated in the same way as for the columns just described, allowing 25 per cent of the ultimate strength in compression on the area of the concrete enclosed by the steel section. In such cases, however, the spiral hooping may be omitted and the outside shell simply reinforced by wire mesh or ordinary hooping weighing at least 0.2 pounds per square foot of surface of shell and with a minimum spacing of strands or hoops of 6 inches.

#### Composite Columns with Cast Iron Core

This type of column, commonly called the "Emperger Column" and named after the well known pioneer in concrete, Dr. F. Von Emperger, the inventor of hooped cast iron columns, consists of a reinforced concrete column with both spiral and vertical reinforcement, a rich mixture of concrete, and a core of cast iron. The section of the core is usually round with a shell of thickness from  $\frac{3}{4}$  inch to about 2 inches, depending on the required capacity of the column. Here again the concrete inside the spiral may be considered as carrying a portion of the total column load and therefore is more economical than the structural steel column simply encased in concrete without spirals. The Joint Committee in its Progress Report of 1921 suggests that the concrete within the spiral core of such columns be designed for a unit stress of 25 per cent of the ultimate strength in compression, and that the unit compressive stress in the cast iron section be determined by the formula:  $f_r = 12000 - \frac{60 h}{R}$ ; where

$f_r$  = compressive unit stress in cast iron section with a max. value of 10,000 #/sq. in.;  $R$  = least radius of gyration of cast iron section in inches;  $h$  = unsupported length of column in inches.

The Joint Committee further suggests that the outside diameter of the cast iron core should not exceed one-half the diameter of the column within the spiral and that the spiral reinforcement be not

less than 0.5 per cent of the volume of the column within the spiral. The American Concrete Institute in its "Standard Building Regulations for the Use of Reinforced Concrete," adopted in 1920, also recommends the use of the preceding formulæ and distribution of loads between concrete and core in the design of composite columns with either structural steel or cast iron cores.

#### Special Features of Design

In the design of high and heavily loaded reinforced concrete buildings, it is customary to use interior columns of spirally reinforced concrete for as many of the upper stories as possible. When the loads eventually become so large that it is no longer advisable, on account of excessive sizes of columns, to continue to use this type in the lower stories, some form of composite column is generally utilized. In order to make certain that the metal core receives the greater portion of the total column load it is advisable that metal brackets be attached to the core in every story. These brackets may be located just below the floor slabs and encased in the column capitals or they may be located just above the floor slabs and encased within the usual column casing. In the latter case the column casing is figured as carrying the floor load down to the bracket placed on the column just above the floor below. Fig. 2 illustrates the type of bracket which is placed just below the floor slab and is encased in the column capital. It consists of a steel bracket built up of angles and is riveted to the structural steel core. Fig. 3 illustrates the type of cap which is placed at the top of the structural steel core to carry the reinforced concrete column above as well as the floor slab at that level. It consists of a steel cap and brackets built up of plates and angles and is riveted to the top of the structural steel core. Figs. 2 and 3 are illustrations of details used in the construction of a large manufacturing building of reinforced concrete with brick veneer for the Gillette Safety Razor Co., South Boston, by Chas. T. Main, Engineer, of Boston.

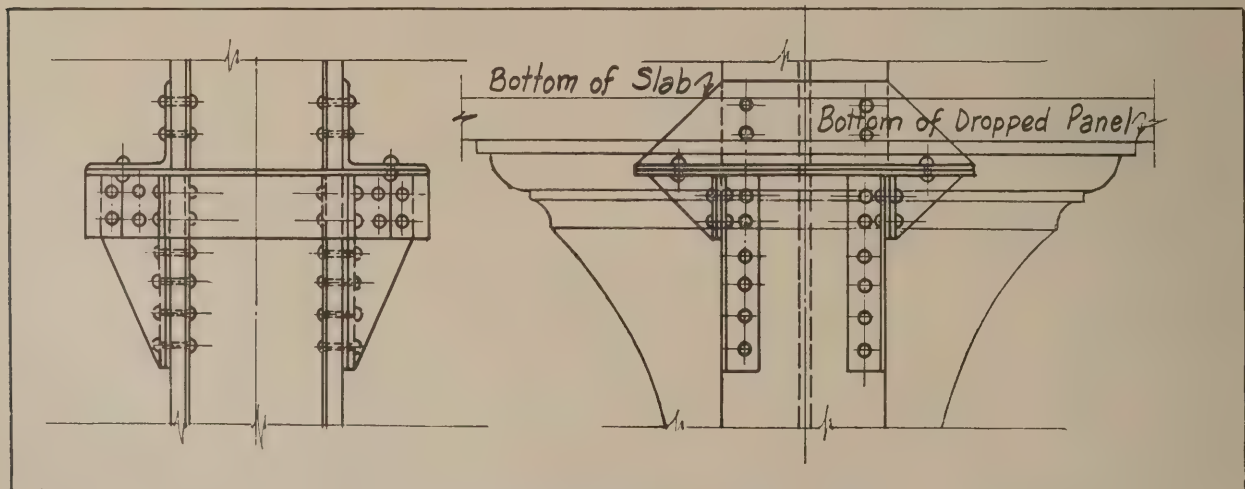


Fig. 2. Type of Bracket Placed Below Floor Slab, Encased in Capital

Where cast iron cores are used suitable brackets should be provided and the same outside diameter of core should be used in as many stories as possible in order to require the use of only a small number of reducing sleeves. At least 5 inches of concrete should be provided for outside the core at all points. In such columns it is also customary to fill the core with concrete of the same mixture as the casing.

### Comparison of Types of Composite Columns

The composite column with the structural steel core is the most common type at the present time and will therefore be considered first. It is advantageous with respect to the type with cast iron core principally on account of the reliability of the material, the comparative ease of making satisfactory connections to it, and the facility for rapid erection. Its disadvantages as compared to the cast iron type are (1) that the structural steel core has a lower ultimate compressive strength than the cast iron core, and (2) that the high modulus of elasticity of structural steel will not permit as great a strength to be developed in combination with concrete as will the cast iron with its comparatively low modulus of elasticity. It is a well known fact that structural steel is a very reliable material of construction, and designers of buildings are likely to utilize it wherever it can be used to advantage. Little difficulty is experienced in making connections to it where necessary, and the splicing of one column section to another is a very simple matter.

Perhaps the best series of tests made in this country on composite columns with structural steel cores is that of Talbot and Lord described in Bulletin No. 56 of the Engineering Experiment Station at the University of Illinois. This series included 32 columns divided into four groups in this way: (1) plain steel columns; (2) core-type columns, i.e., columns in which the portion within the structural steel members was filled with concrete but without

spiral reinforcement; (3) fireproofed columns, i.e., core-type columns having a 2-inch protective covering but with no spiral reinforcement; (4) spiral columns, i.e., core-type columns enclosed in close fitting spiral and filled with concrete to outer surface of spiral.

The core-type column proved to be very tough, and failure was slow. For short columns failure was caused in most cases by the crushing of the concrete; for longer columns failure was caused by bending and the crushing of the concrete. The effect of the concrete mix was small, because the strength of the column was governed by the steel rather than by the concrete. The determination of the proportion of load carried by the steel and the concrete was based upon the assumption that for a certain deformation in the core-type column, the steel core carried the same load as that carried by a plain steel column of the same section for the same deformation, and that the balance of the load in the core-type column was carried by the concrete. The fireproofed columns gave about the same results as the core-type columns.

The spiraled columns with structural steel cores showed considerably greater strength and toughness than similar columns without spiral reinforcing; in fact their ultimate strength exceeded the capacity of the testing machine at that time. On account of large deformation necessary the full strength afforded by spiral reinforcing is not available in building construction, and therefore a large percentage of spirals is not justifiable. In most cases 1 per cent of the volume of the enclosed concrete is ample and will provide for a tougher and safer column and also will prevent spalling of the outer shell. Since danger of sudden failure is removed, the results of these tests indicated that such columns may be designed for higher working loads than the fireproofed type of column. The steel cores used in these tests were the Gray type shown in Fig. 1 (e) and were made up of eight  $3 \times 2\frac{1}{2} \times \frac{5}{16}$ -inch angles

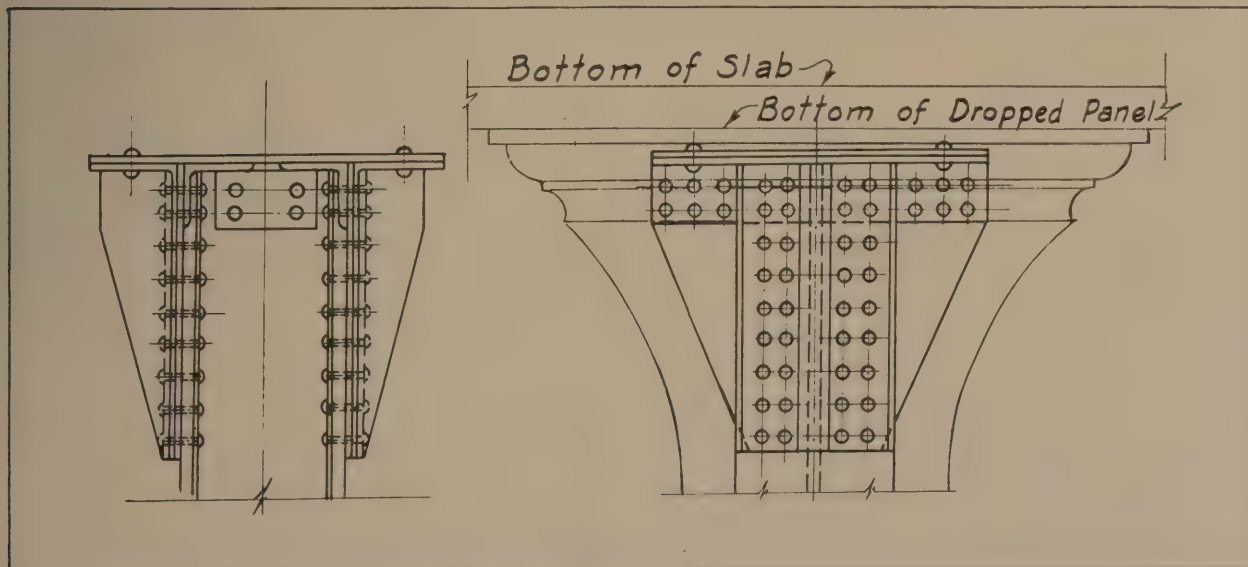


Fig. 3. The Type of Cap Placed at Top of Structural Steel Core



with  $5\frac{1}{2} \times \frac{1}{4}$ -inch steel ties spaced about 16 inches on centers, the core being about 12 inches outside diameter.

The composite column with a cast iron core is a very economical column. It is theoretically a more suitable column than the type with a structural steel core, due to the much greater compressive strength of cast iron. When encased in concrete which is reinforced with longitudinal rods and spiral hooping it makes a very desirable column for heavy loads if the quality and uniformity of the cast iron core can be assured. The strength of cast iron is very uncertain in tension, and this type of column is intended to largely eliminate the possibility of tension in the cast iron, due to bending stresses in the column, by encasing the core with a liberal thickness of concrete well reinforced both vertically and spirally. This casing also serves as excellent fireproofing. L. J. Mensch in a paper on "Tests of Concrete Columns with Cast Iron Core" presented at the Thirteenth Annual Convention of the American Concrete Institute says: "... the combination of hooped concrete and cast iron makes it possible to develop the ultimate strength of both the hooped concrete and the high compressive strength of the cast iron." He further says in conclusion: "To sum up, we have in hooped concrete columns reinforced with cast iron, a new type of compression member which can sustain stresses up to 17,000 pounds per square inch, and hence allows smaller sizes than columns built of structural steel, at a very great saving in cost." A disadvantage in the use of this type of column, however, is the comparative unreliability of cast iron as a structural material. Flaws and blow holes are likely to be present in spite of thorough inspection. This type of column has been used principally in the Middle West. Fig. 4 shows a typical cross section of one of the composite columns with cast iron core which was tested by Mr. Mensch.

#### Advantage in Size Over Spiral Columns

That there is a reduction in the diameters of composite columns for a given loading as compared with spiral columns is evident from an examination of the tables given here. Table I gives the capacities of round concrete columns of various diameters with vertical and spiral reinforcement as based on the formula adopted by the Joint Committee in January, 1917. The concrete mix is 1 : 1 : 2, and the coarse aggregate is granite or trap rock. The spiral reinforcement is approximately 1 per cent of the volume of the enclosed concrete. Table II gives the capacities of round concrete columns with structural steel (H-section) cores and with spiral reinforcement as based on the formula suggested in the Progress Report of 1921 by the Joint Committee. The concrete mix is 1 : 1 : 2, and the coarse aggregate is granite or trap rock. The spiral reinforcement is approximately 1 per cent of the volume of the enclosed con-

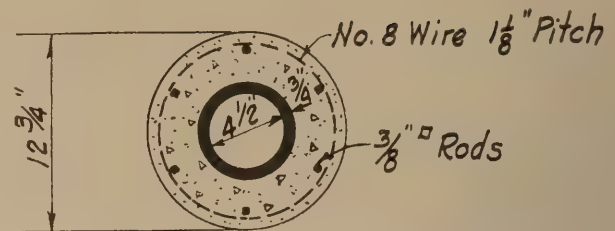


Fig. 4. Section of Composite Column; Cast Iron Core

crete. Table III gives the capacities of round concrete columns with round cast iron cores and with spiral reinforcement as based on the formula suggested in the Progress Report of 1921 by the Joint Committee. The concrete mix is 1 : 1 : 2, and the coarse aggregate is granite or trap rock. The spiral reinforcement is approximately 1 per cent of the volume of the enclosed concrete.

It is apparent that the reduction in size is much greater with a structural steel core than with one of cast iron. This is due to the comparatively low compressive stresses permitted in the formula used for the determination of the working stresses in the cast iron core. The results of the tests by Mr. Mensch seem to indicate that somewhat higher stresses might be safely used when a good quality of cast iron is secured and the core thoroughly encased in concrete.

In conclusion, it may be said that we have in composite columns a means of materially reducing the sizes of interior columns in the lower stories of high concrete buildings. That this is a matter of particular importance at the present time cannot be denied in view of the high rental values of floor space in modern buildings. The adoption of this type of column has made possible the utilization to good advantage of reinforced concrete construction in buildings to an extent once thought impractical.

Table I

Outside Dia.	Spirals Size	Pitch	Vert. Steel 4%	Safe Load
18 in.	$\frac{5}{16}$ in.	2 in.	7.08 sq. in.	277,000 lbs.
20 in.	$\frac{3}{8}$ in.	$2\frac{1}{2}$ in.	9.08 sq. in.	355,000 lbs.
22 in.	$\frac{3}{8}$ in.	$2\frac{1}{4}$ in.	11.36 sq. in.	444,000 lbs.
24 in.	$\frac{3}{8}$ in.	2 in.	13.84 sq. in.	542,000 lbs.
26 in.	$\frac{7}{16}$ in.	$2\frac{1}{2}$ in.	16.60 sq. in.	650,000 lbs.
28 in.	$\frac{7}{16}$ in.	$2\frac{1}{2}$ in.	19.60 sq. in.	767,000 lbs.

Table II

Outside Dia.	Spirals Size	Pitch	Structural Steel Core	Safe Load h = 12 ft.
18 in.	$\frac{5}{16}$ in.	2 in.	8 in. B.H. 91.0 lbs.	480,000 lbs.
20 in.	$\frac{3}{8}$ in.	$2\frac{1}{2}$ in.	10 in. B.H. 136.5 lbs.	725,000 lbs.
22 in.	$\frac{3}{8}$ in.	$2\frac{1}{4}$ in.	12 in. B.H. 133.5 lbs.	778,000 lbs.
24 in.	$\frac{3}{8}$ in.	2 in.	12 in. B.H. 190.0 lbs.	1,070,000 lbs.
26 in.	$\frac{7}{16}$ in.	$2\frac{1}{2}$ in.	14 in. B.H. 245.5 lbs.	1,383,000 lbs.
28 in.	$\frac{7}{16}$ in.	$2\frac{1}{2}$ in.	14 in. B.H. 288.5 lbs.	1,630,000 lbs.

Table III

Outside Dia.	Spirals Size	Pitch	Cast Iron Core Outer Dia. Thickness	Safe Load h = 12 ft.
18 in.	$\frac{5}{16}$ in.	2 in.	7 in. $1\frac{1}{4}$ in.	303,000 lbs.
20 in.	$\frac{3}{8}$ in.	$2\frac{1}{2}$ in.	8 in. $1\frac{1}{4}$ in.	389,000 lbs.
22 in.	$\frac{3}{8}$ in.	$2\frac{1}{4}$ in.	9 in. $1\frac{1}{2}$ in.	516,000 lbs.
24 in.	$\frac{3}{8}$ in.	2 in.	10 in. $1\frac{3}{4}$ in.	661,000 lbs.
26 in.	$\frac{7}{16}$ in.	$2\frac{1}{2}$ in.	11 in. 2 in.	822,000 lbs.
28 in.	$\frac{7}{16}$ in.	$2\frac{1}{2}$ in.	12 in. 2 in.	956,000 lbs.

NOTE.—Cast iron cores filled with 1:1:2 concrete.

# DECORATION & FURNITURE

## Details of the Large Hall Chateau de Montfermeil, Paris

CLASSIC INFLUENCE IN LOUIS XIV INTERIORS

*Drawn by C. HAMILTON PRESTON*

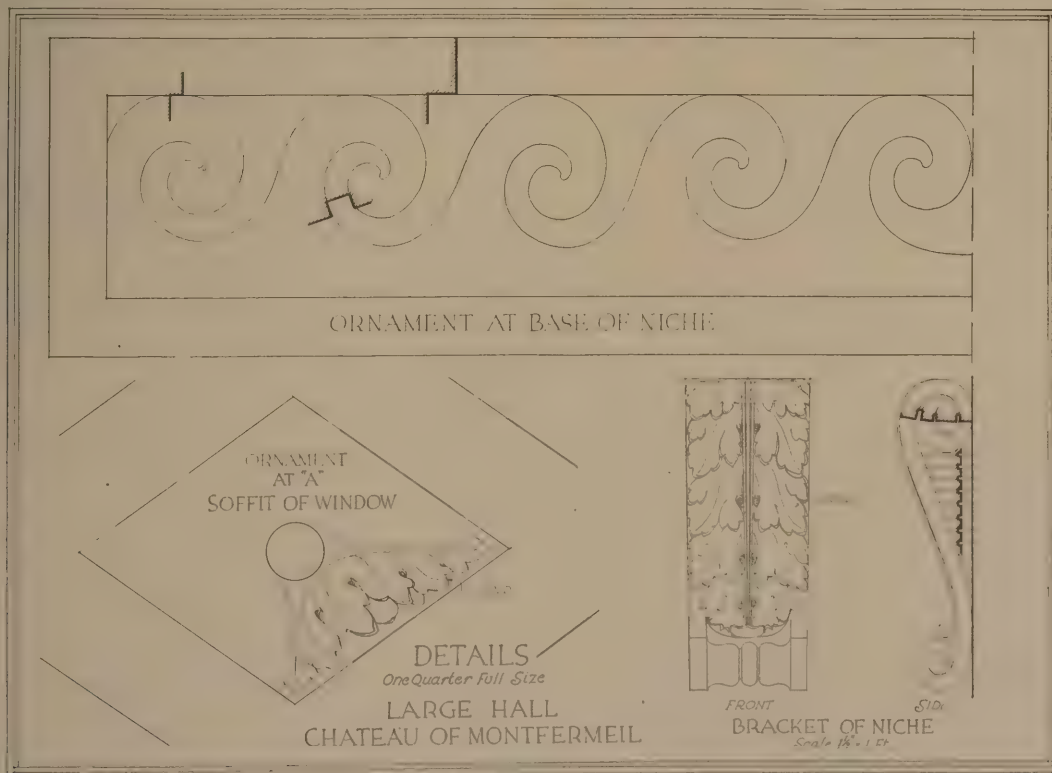
THE large hall in the Chateau de Montfermeil, even more than the two salons, shows the influence of Classic architecture. In this room of perfect proportions, 24 feet, 3 inches wide by 38 feet, 3 inches long and 17 feet high, a balanced design is carried out by means of fluted pilasters, richly ornamented entablature, splendid doorways, and graceful wall niches. Of the long walls of the room, which runs north and south, the east wall shows three casement windows, that in the middle extending to the floor, each separated by double pilasters so spaced that they divide the wall into three major parts, each containing a window opening; the west wall shows a similar grouping of pilasters, forming three wall spaces, in which two niches and a center doorway balance the window openings opposite. The north and south elevations are likewise divided, but by single instead of double pilasters.

Unusual care was taken in the detail, which shows great refinement and delicacy, not only in the mouldings of the architraves and pediments of the door-

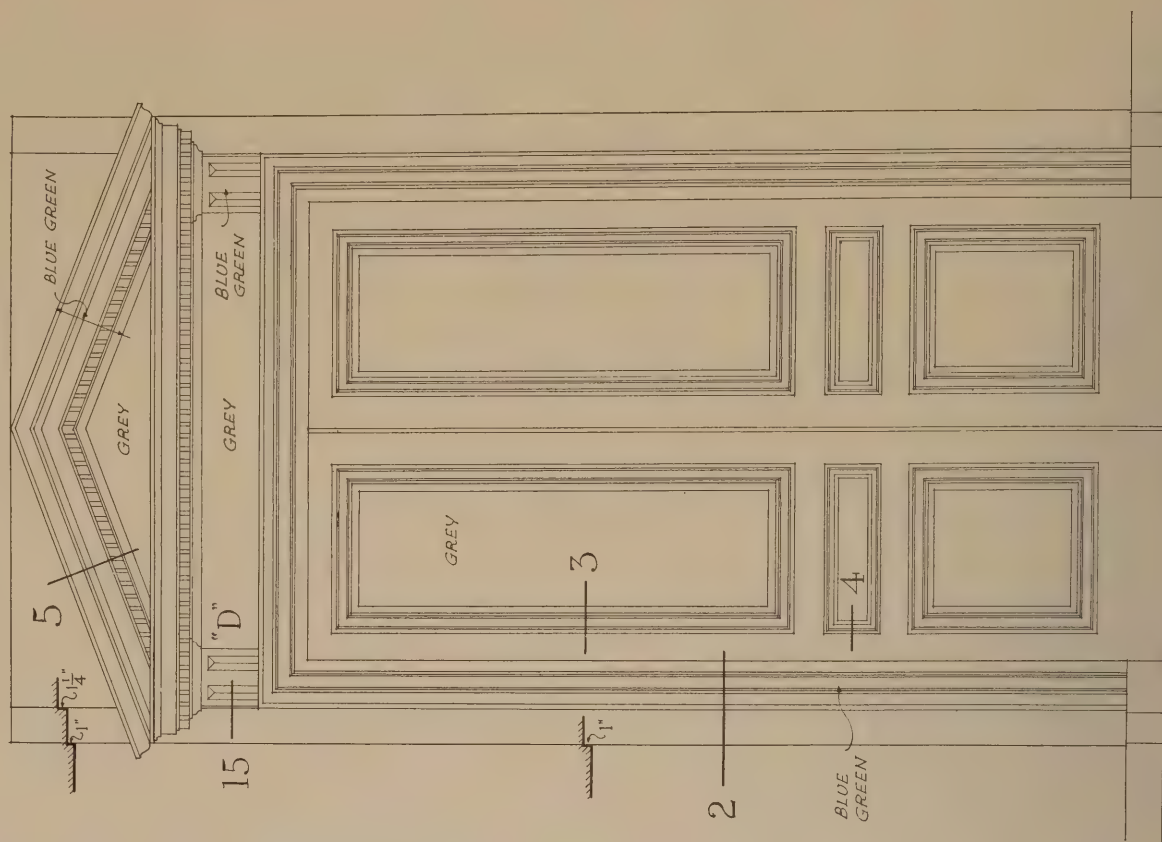
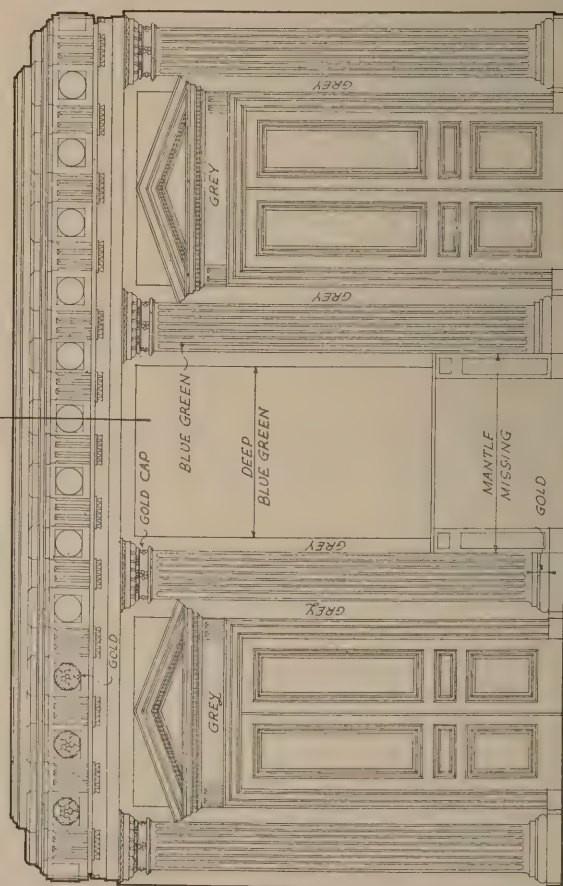
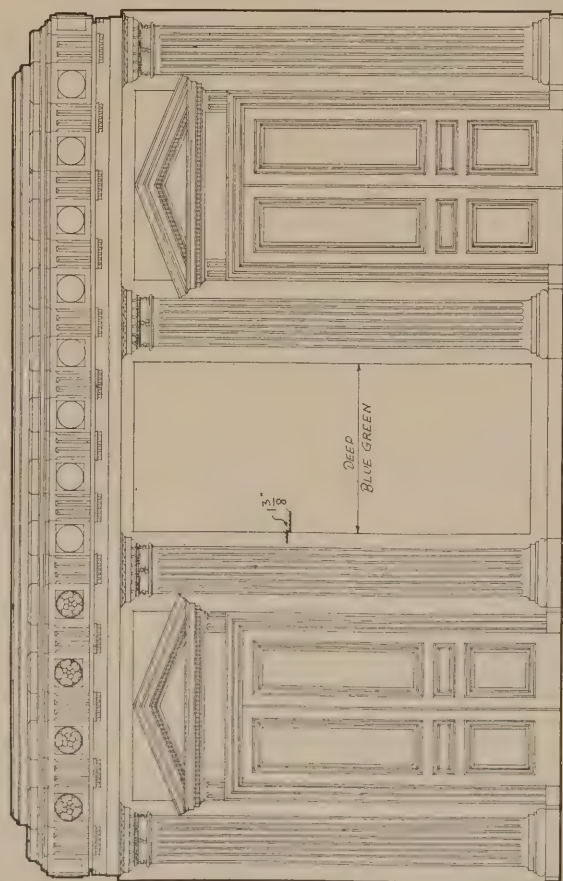
ways and niches but also in the carved Tuscan caps of the pilasters and the Classic entablature, richly ornamented with triglyphs and metopes in which are carved rosettes. Combined with this beauty of detail is a consideration for scale and proportion which makes this room one of the superb examples of interior architecture designed during the Louis XIV period. So Classic in feeling is the detail that it might well have been copied from some room in one of the Roman palaces of the Italian Renaissance.

The architecture of this hall is splendidly decorated with color, offset by the deep brown tones of the parquetry floor. The general color throughout is gray, relieved by deep blue-green in the pilasters and end wall panels, with gold used to enrich the bases and caps of the pilasters and the brackets and rosettes of the entablature.

This use of color with gold should serve as an inspiration to modern designers who appreciate and understand the importance and value of color in interior decoration and architectural ornament.



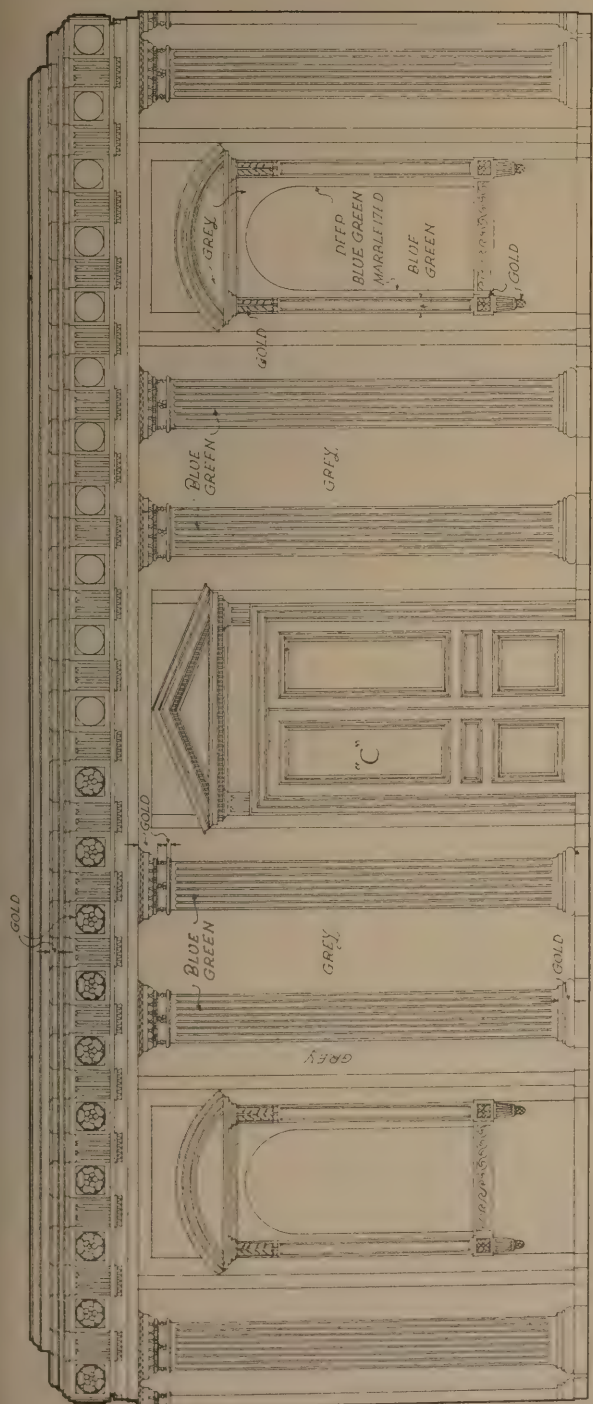




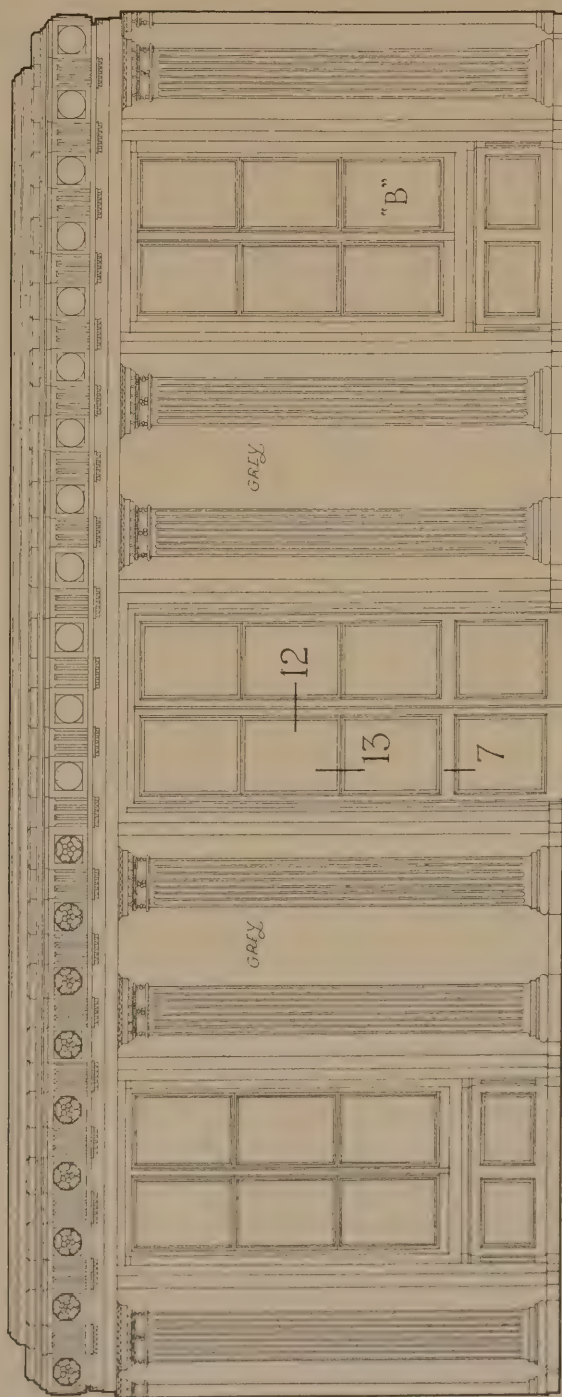
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CHATEAU OF MONTFERMEIL

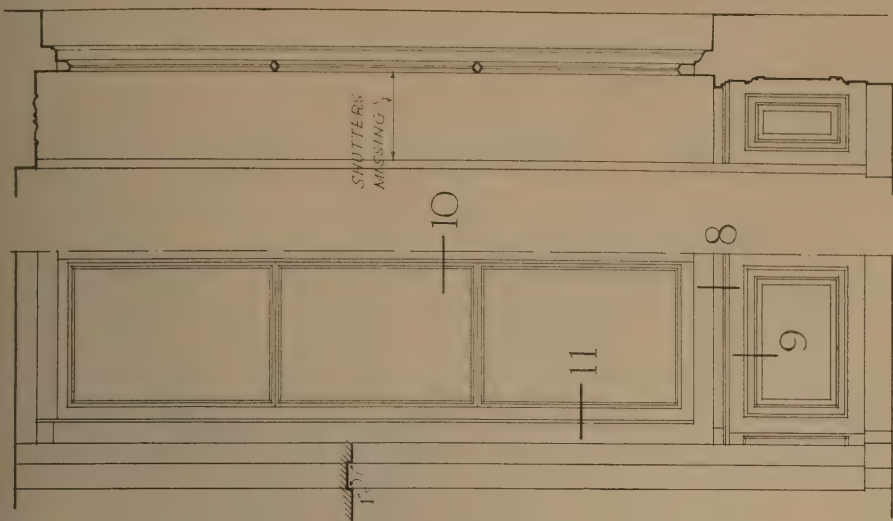
LARGE HALL



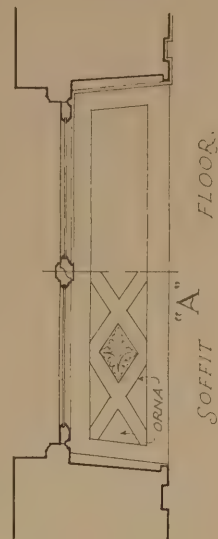
WEST ELEVATION



EAST ELEVATION  
LARGE HALL  
CHATEAU OF MONTERMEIL  
Scale  $\frac{3}{16}$ " = 1 Foot

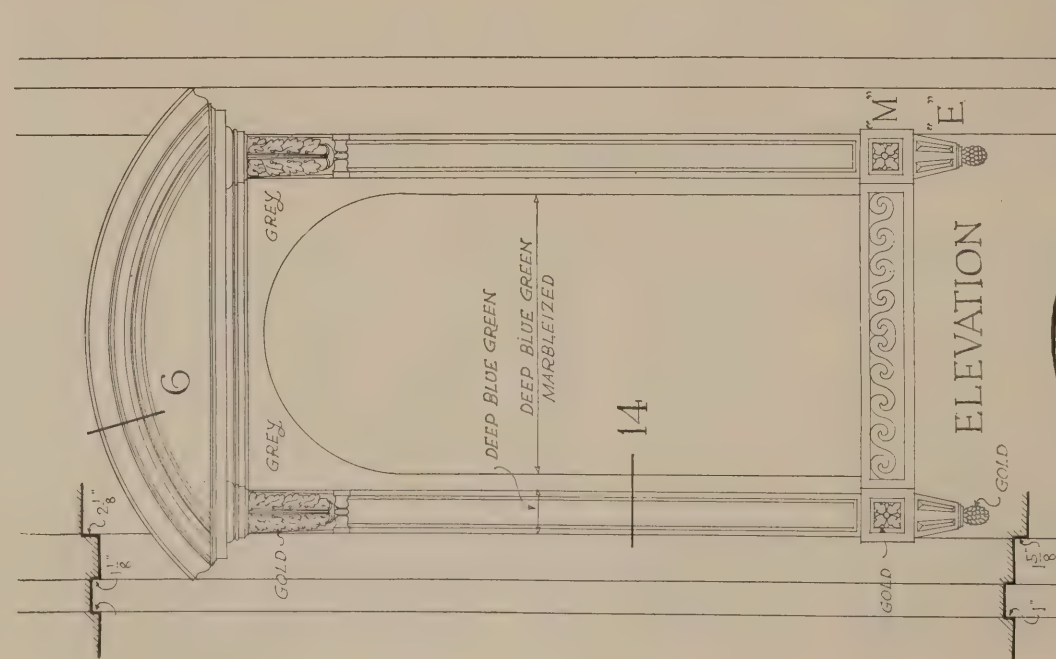


$\frac{1}{2}$  ELEVATION  
OF WINDOW AT 'B'  
SECTION  
Scale  $\frac{3}{8}$ " = 1 Foot



FLOOR PLAN





ELEVATION

SECTION

PLAN AT "M"  
Scale  $\frac{1}{2}$ " = 1 Ft

DETAILS.  
One Half Full Size

DETAIL AT "M" Full Size

LARGE HALL

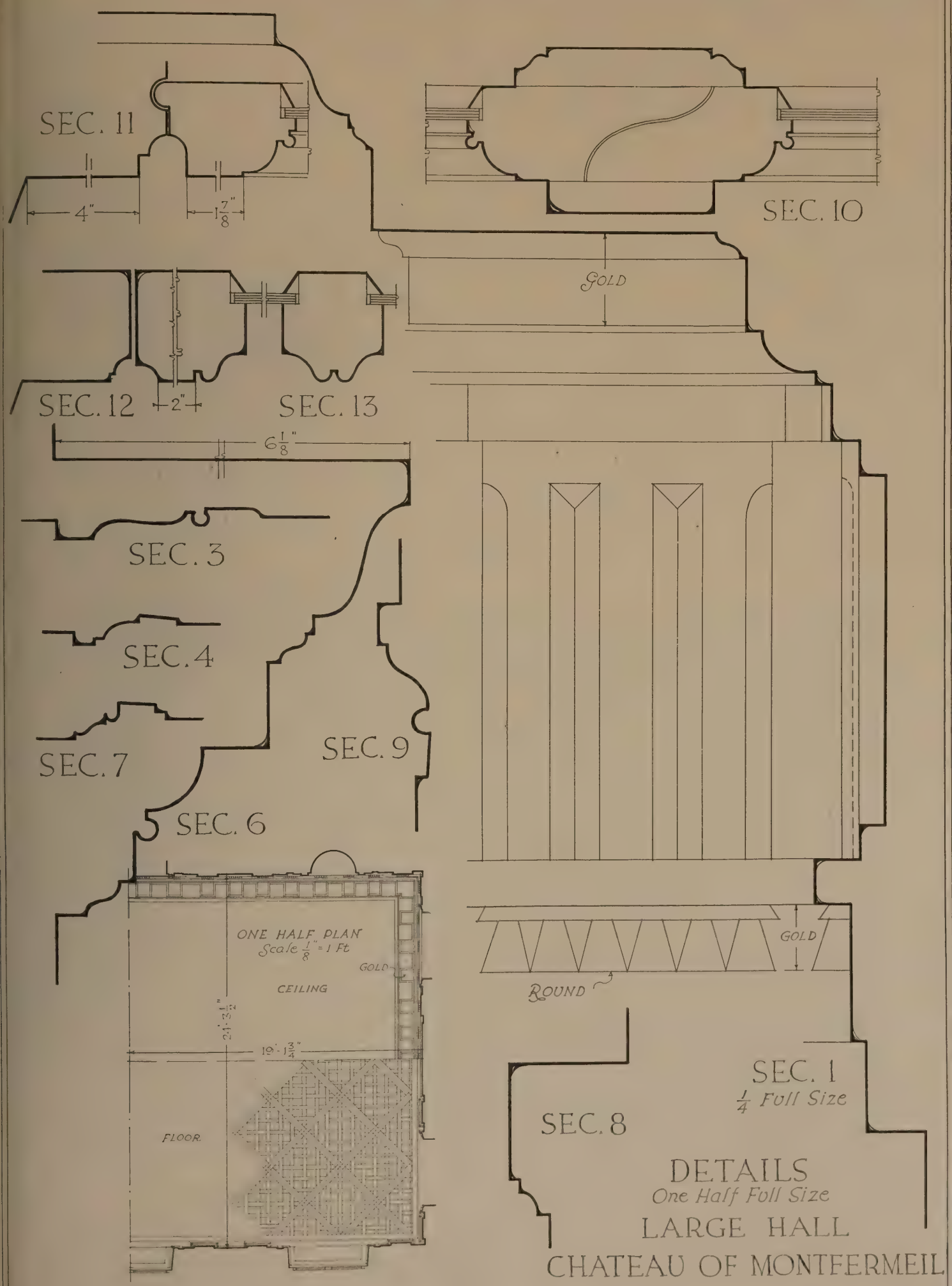
CHATEAU OF MONTFERMEIL

SEC. 14

SECTION  
 $\frac{1}{2}$  ELEVATION  
AT "E"

GOLD

GOLD



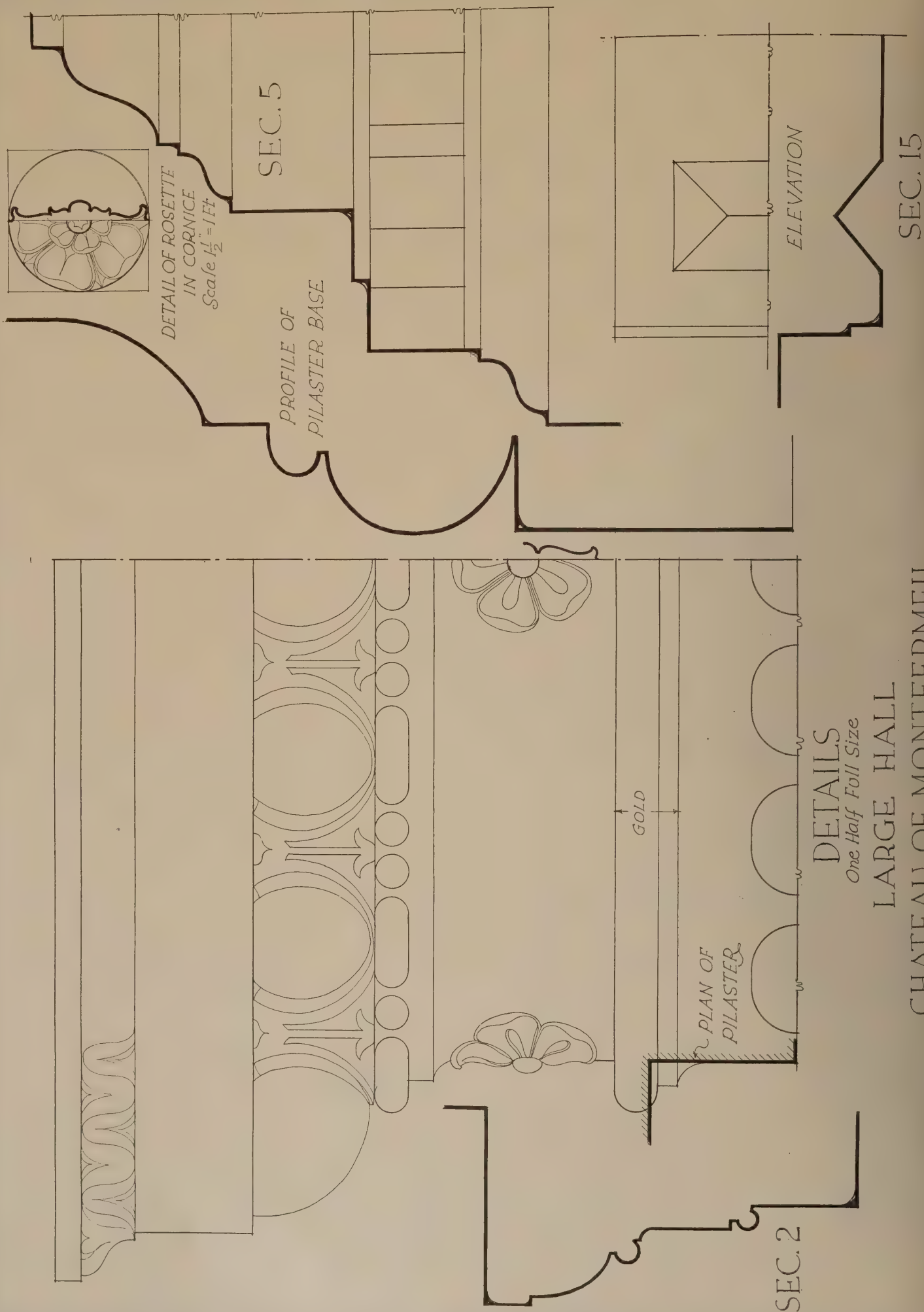
SEC. 1  
 $\frac{1}{4}$  Full Size  
SEC. 8

DETAILS  
One Half Full Size  
LARGE HALL  
CHATEAU OF MONTFERMEIL



# CHATEAU OF MONTFERMEIL

## DETAILS One Half Full Size



## Plate Description

ST. PAUL'S CHURCH, NEWBURYPORT, MASS., Plates 29, 30. Perry, Shaw & Hepburn, Architects; Office of R. Clipston Sturgis, Consulting Architect.

Shut in by a wall, with a century-old graveyard on one side, this stone church in simple Colonial style defies the casual observer to say whether it is new or old. Built of irregular shaped blocks of West Townsend granite laid up random, the exterior design shows the severe restraint and dignity characteristic of the early New England meeting-house. The unusual care taken in the size and scale of the window openings and their relation to the wall surfaces, as well as the accuracy and good taste displayed in the use of Colonial detail, contributes to this building's appearance of age, and makes it difficult to believe that it replaces one of wood built in 1810, destroyed by fire in 1921.

The interior, which is finished in plaster with wooden trim, columns and entablature painted white, has old fashioned box pews with doors, mahogany rails and book racks. The tall, slender columns, which support the end balcony and form two side aisles, the high wall panels and pilasters, the wide entablature with delicate mouldings and the flat paneled ceiling above a lofty cove, all give great dignity to the interior. The octagonal pulpit with its mas-

sive but graceful canopy, and the pedestal of delicate design which supports the lectern book rest—a bronze eagle of beautiful modeling—are excellent examples of the logical use of Colonial detail.

THIRD DISTRICT COURT HOUSE, NEW YORK. Plates 31, 32. Alfred Hopkins, Architect.

For civic buildings there is no style of architecture better adapted or more appropriate than the Florentine phase of the Italian Renaissance, in which the new Magistrates' Court House of the Third District has been designed. The plans show three floors and a mezzanine. The basement is devoted to boiler room and storage space. Besides the entrance lobby and stairway, the first floor contains a complaint room, and a police department with 15 cells of which 9 are on the mezzanine floor. A large courtroom occupies the greater part of the third or top floor. The exterior is built entirely of brick in the Italian style, showing interesting use of moulded brick in the architraves of the arched entrance door and upper windows. Bronze lanterns and door grille add to the decorative effect of the entrance. The interior shows a successful and consistent use of this same style in both architectural details and furnishings, unusual and satisfying.



Magistrates' Court Room—Third District Court, New York

Alfred Hopkins, Architect



# EDITORIAL COMMENT

## THE HOUSING PROBLEM

IT is not only the housing of the well-to-do, so attractively and successfully demonstrated by Andrew J. Thomas, Architect, in the garden apartments of Jackson Heights, but also the more important problem of housing the wage earner at a minimum cost in light, airy, modern apartments which is engaging public attention.

The seriousness of this problem locally can be appreciated when it is realized that New York is 16 years behind in the building of homes for working men. To alleviate this unfortunate situation, individuals, corporations, legislative committees and newspapers have instituted investigations to secure reliable information to bring to the attention of the city government as well as the public, information showing a practical way in which the existing inadequate and deplorable housing conditions may be remedied. That there is a practical way out of the present situation has been demonstrated to the satisfaction of the Lockwood Committee of the New York Legislature, as well as investing companies such as the Metropolitan Life Insurance Company. This company has just completed the construction in Long Island City, on three different sites, of altogether 54 houses, which will accommodate 2,125 families, or about 9,000 persons, from designs prepared by Andrew J. Thomas and D. Everett Waid, associated architects.

It was the opinion of many builders, real estate operators and owners that houses could not be built, under ruling prices for labor and material, to rent for rates lower than \$20 per room with any profit to the builder or owner of the property—a rental entirely prohibitive to a very large proportion of the city dwellers, resulting in the inevitable crowding of two or three families into rooms intended for one family, the evil effect of which needs no argument, but does require a speedy and permanent remedy. The tragedy created by such crowded conditions can hardly be conceived by anyone unfamiliar with the situation in New York, where about 90 per cent of the people are obliged to live in multi-family houses, where there are no vacancies, and where consequently the landlords not only double and quadruple the rents, but also give as little service as possible. At last the worm has turned; the long suffering renters, by coöperative effort through tenants' associations, are combating the extortions of the landlords in the state legislature, where laws to protect tenants and to encourage the erection of houses in which the maximum rental can be \$9 per room per month, have recently been enacted. The Metropolitan Life Insurance Company, under the able and experienced leadership of Mr. Thomas and Mr. Waid, agreed to build such houses after the esti-

mates on the submitted plans satisfied them that the rental of \$9 per room would produce on the actual cost of land and buildings a net return of 6 per cent, and 2 or 3 per cent more to amortize the cost of the houses.

The plans for all the houses except eight provide on each floor two apartments of three rooms and dining alcove, four apartments of four rooms and dining alcove, and two apartments of five rooms. For the complete bathroom in each apartment, for steam heat, hot water and janitor service, no charge is made. All apartments have electric light and gas facilities, which are paid for by the tenants. Between the houses, which are five stories in height, are courts or side yards 12 to 16 feet wide running from street to rear yard. The U-shaped plan of each house with open rear permits a large yard between the two wings from 36 to 42 feet in width by about 60 feet deep. The central yard, running the entire length of the block, is from 26 to 36 feet in width. There is abundant open space surrounding every house, so that perfect light and ventilation and greater safety from fire, as well as no dark inside rooms are assured. The four stairwells and stairways in each building, lighted by outside windows on each floor, are fireproof, as are also the self-closing doors to all apartments. Every apartment has access to a fire escape, none of which is on the front. The houses are therefore as safe from fire as it is possible to make buildings in which floors and partitions are of wood and plaster construction.

Every possible economy in construction was resorted to, such as importing from Holland, at a saving of \$8 to \$10 per thousand, the 14,000,000 face brick needed, and bringing by steamer from the Pacific Coast, already cut to proper lengths, 5,600,000 of the 32,000,000 feet of lumber required, producing a saving for the owners of at least \$1,000 per house.

The lesson to be derived from this successful experiment seems obvious. Although it is doubtful if 8 per cent net on cost could be realized without the present tax-exemption, which expires January 1, 1932, at a rental of \$9 per room per month, there is no doubt that an additional rent of \$1.50 per month per room, would sufficiently provide for full taxes. If, therefore, limited dividend corporations, other life insurance companies and employers of labor desiring to build apartment houses at the present possible rent, with a sure return of say 8 per cent would use the same methods as the Metropolitan Company has used in this operation, there seems to be no doubt that a maximum rental of \$10 to \$11 per room per month will produce 8 per cent net and pay full taxes, if the houses are built on low priced land, easily and cheaply prepared for building and with public utilities already provided.

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*Early 17th Century English Oak Court-Cupboard, by Kensington*

17th Century English oak furniture expresses the character of a great home-loving people. In fact, much of its fascination lies in its livable quality—the sense it imparts of homely service. It has an individuality, too, not found in the more highly developed work of the Continent because it grew under the hands of the craftsman and was not the realization of a formal design previously conceived in detail.

We illustrate an interesting example—a court cup-board reproduced from an early 17th Century original. The form is distinctly English, well-balanced and an excellent piece of cabinet construction. In all of the ornament is the spirit of the renaissance, but most entertainingly rendered in the traditions of English

craftsmanship. Furniture such as this, so expressive of Anglo-Saxon character, finds its place naturally in the American home.

All of the character and the decorative quality of the old work are retained in Kensington reproductions, because they, too, are the product of real craftsmanship and faithfully reflect the spirit as well as the form in every detail of design.

Kensington Furniture is made in all the decorative styles appropriate for American homes. Architects interested in completing the interiors they design with furnishings harmonious in both character and quality are cordially invited to avail themselves of the service of the Kensington Showrooms and staff.

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## A Theatre by Tobey in the Style Francis I

THE interior of the Parkway Theatre, Madison, Wisconsin, shown here, is done in the style Francis I. that marks the transition from Gothic to Renaissance.

J. E. O. Pridmore is the architect.

In coloring it is a light gray, with touches of vermilion, cobalt blue and gold.

The wall panels between the pilasters are painted in two tones of gray, combed to give the effect of textiles and decorated with the mille-fleurs pattern so frequently found in Gothic tapestries.

The stage curtain was also done by Tobey in

vermilion velvet, appliqued and painted, after the same manner of medieval embroidery.

Our service of co-operation with the architect on this theatre was complete. It included decorating, draperies, carpets, the permanent set on the stage, the designing of the electric light fixtures and in an advisory capacity the design of the chairs and the selection of the upholstery color.

Tobey is ready to co-operate with architects on fine buildings, either in the planning of the interior, including the preparation of color sketches and elevations, or in the bidding on the actual execution only. In either case our complete decorator service is offered without charge.

## The Tobey Furniture Company

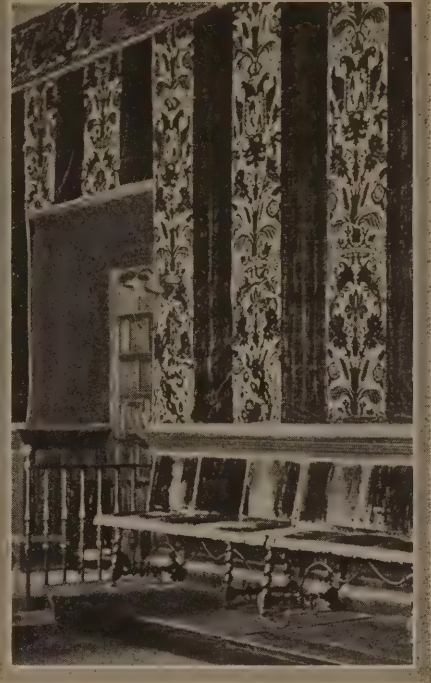
Wabash Avenue—CHICAGO

Fifth Avenue—NEW YORK





*The old Spanish velvet is reproduced in brocatelle weave with all its feeling and decorative value.*



*On the walls of the council room in the old City Hall of Toledo, Spain, hangs this splendid sixteenth-century velvet.*

## A SPANISH BROCATELLE

*In Toledo, the old Castilian city, hangs the original XVI century wall covering*

IN that old hundred-towered town, on the walls of the council room of the City Hall still hangs the sixteenth century Spanish velvet which inspired this colorful modern brocatelle.

Today, rich and mellowed by the centuries, all the beauty of this gorgeous wall hanging is reborn in a modern fabric which simulates not only its spirit, but preserves in every detail its entire decorative value.

This modern replica has the antique red which time gradually evolved from the flaming crimsons in vogue fifteen generations ago—the dulled background of long-tarnished gold, the soft, rubbed, worn look which seems to come from centuries of use—in short, the spirit of an old and princely fabric carefully preserved and reproduced.

In its design of the conventionalized fruits and flowers of Spain, this Schumacher fabric faithfully follows the original. A large oval motif of foliage,

wheat, and berries, beautifully spaced, encloses a fleur-de-lis and is surmounted by a richly jewelled crown in characteristic Spanish fashion.

The interest of this brocatelle, a triumph of modern textile weaving, is further increased by the fact that it was woven in this country—at Schumacher's own mills. Other color combinations appropriate to Spanish decoration have also been evolved in the same interesting design.

Dealers and decorators will find, at the Schumacher establishment, a gratifyingly wide selection of brocatelles, velvets and various fabrics suited to Spanish interiors as well as to other types of decoration.

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*Just as in the original, the warp seems to be worn away from the background here and there, giving it the rubbed look of centuries of use, an example of the most expert modern weaving!*

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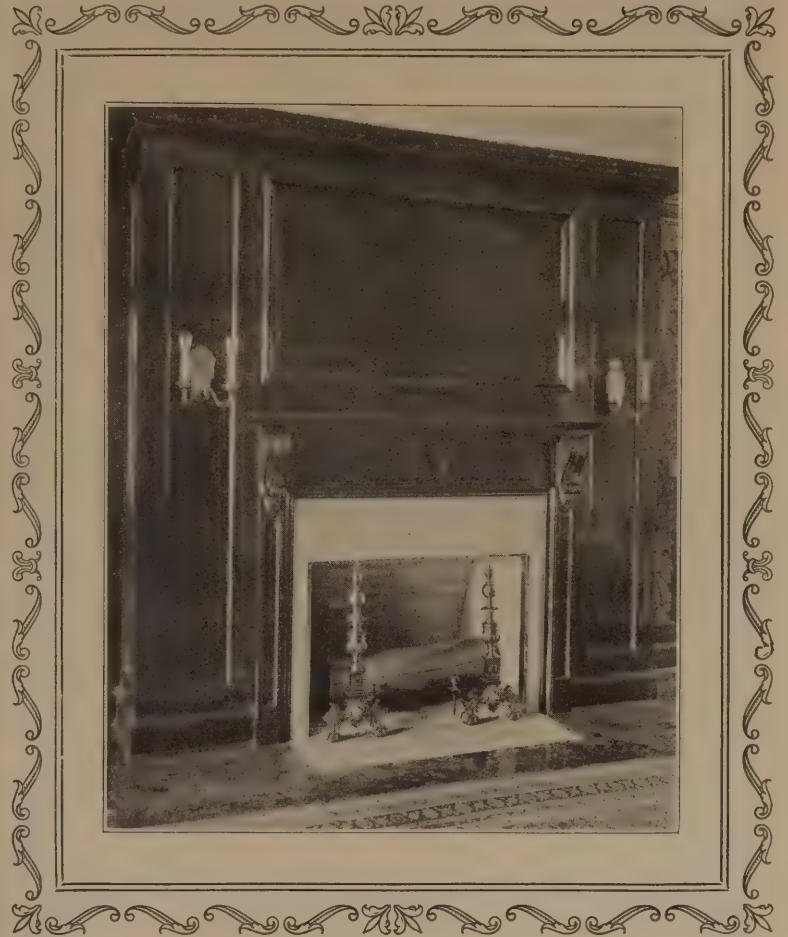
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Matched Walnut Stumpwood Panel



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OVER this handsome fireplace hangs no painting by human hands, just a panel of matched stump walnut, properly finished to bring out the beautiful figured design nature lavishes on this favorite wood.

This fireplace is in the home of J. H. Aufderheide of Indianapolis, one of the finest private residences in the Hoosier state.

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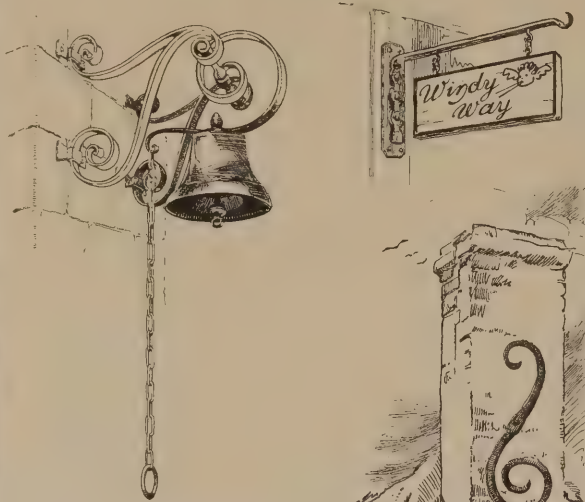
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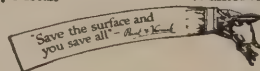
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For complete linoleum specifications see Sweet's Architectural Catalog, pages 498-503. Or write for "Armstrong's Linoleum Floors," a 36-page, 8½ x 11 inch handbook prepared especially for architects and containing laying specifications and reference information on the use of linoleum.





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 Owner and Manager

May 12th, 1924.

Murphy Door Bed Company,  
 22 West Monroe Street,  
 Chicago, Illinois.

Gentlemen:-

Now that my new hotel The Sherwin, has been completed, it has occurred to me that this marks a milestone in the history of Murphy Beds.

It is about ten years ago, that I conceived and built the Hotel Birchmont, the first residential hotel with concealed beds erected in Chicago.

It is a note-worthy fact, that the Murphy Beds which you installed in Birchmont Hotel, have been in continuous use during this time and that I have had no expense for repairs. This has much to do with my selection of the same equipment for the Sherwin, and may be of interest to others considering equipment of this kind.

Very truly yours,

VMC:JB.

*Vernon C. McGill*



The Hotel Birchmont where Murphy In-A-Dor Beds have given ten years' satisfaction at no expense for repairs.

Above—The Hotel Sherwin, Mr. McGill's newest hotel, also equipped with Murphy Beds. Walter W. Ahlschlager, Architect.

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Chelsea	Chicago
Churchill	Chicago
Commonwealth	Chicago
Forest Park	St. Louis
Gatesworth	St. Louis
Hayes	Chicago
Melbourne	St. Louis
Morrowfield	Pittsburgh
Oak Grove	Minneapolis
Oak Park Arms	Chicago
Orrington	Evanston
Peacock	Kansas City
Pennsylvania	Philadelphia
Pine Grove	Chicago
South Shore	Chicago
Sovereign	Chicago
Stoneleigh Court	Dallas
Vernon Manor	Cincinnati
Whittier	Detroit
Windermere East	Chicago

## Ten Years of Murphy Satisfaction

The letter tells why another of America's finest hotels is equipped with Murphy In-A-Dor Beds

Ten years ago Vernon C. McGill built the Hotel Birchmont, installing in it Murphy In-A-Dor Beds. This was the first residential hotel in Chicago so equipped.

How completely these beds have satisfied tenants and builder is evidenced by the popularity of the Birchmont, the enthusiastic letter reproduced above and the recent installations in the Sherwin and many other of the largest and finest hotels in the country.

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THERE IS ONLY ONE IN-A-DOR BED—"THE MURPHY"





Edgewood, near Edgefield, S. C.  
Selected from Ware's Georgian Period  
© U. P. C. Book Co.

## This building blends Colonial with Greek design

EDGEWOOD, near Edgefield, S. C., was once the home of Governor Francis W. Pickens. Built in 1830, it is typical of the interesting Colonial houses to be found in the South.

It is a modest structure, intended for use as an ordinary dwelling. It rambles over the ground with true Southern disregard of space till the front spans a length of full forty yards.

"That the architectural thought is Colonial," says a prominent architect, "is told not only by the successful refinement of the mouldings of the main portico and the decoration of the front with the pediment, but most of all by the artistic feeling that dictated the treatment above the column caps with a series of elliptical arches.

"In the flat pediments of the pavilions there are traces of the influence of the Greek Revival, while the caps and bases are naive imitations of the proper forms. The main house, pavilions and connecting galleries are faced with a long veranda which adds an attractive touch to the structure."

Colonial houses in the South, such as Edgewood,

are generally painted white or light tints of brown or yellow, occasionally with a darker trim. From generation to generation, paint has given lasting protection to these old Southern homes.

*These measured drawings will be sent you free* Detailed drawings of Edgewood exteriors have been made by E. P. Morrill. They form part of a working-size, loose-leaf portfolio of accurately measured Colonial exteriors and interiors. We have your copy of *Early American Architecture* ready to mail to you. Write us for Portfolio No. 14.

The historical notes you have just read will not, however, appear in the Portfolio. So keep this page for reference after you receive your Portfolio.



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you save all!

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Federal Reserve Bank of Minneapolis

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CASS GILBERT of New York is the Architect of the Federal Reserve Bank of Minneapolis. F. A. Leekley, of Minneapolis, is the painting contractor. To meet the specification requirements for the painting, Leekley stocked 10,000 pounds of Eagle.

An architect specifying Eagle White Lead in Oil will find the painting contractor receptive to his choice.

The virtue of Eagle White Lead in Oil for fine painting lies in the Old Dutch Process of manufacture. The Old Dutch Process has been the standard for the production of white lead for the past several centuries. The basic principles of the process antedate the Christian era. The process was refined by the Venetians and reached a high point of development with

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The Eagle Brand first appeared in the market in 1843. Since that time Eagle White Lead in Oil has been pure Dutch Process White Lead. The Old process has been refined and improved since that time, but the basic principle of manufacture has been the same slow corrosion.

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Minnehaha Lodge Building, Minneapolis

## What an Old Eagle Painter Discovered About Sublimed Blue Lead

Send for your copy of "Specifications for Painting Structural Steel and Iron."



CON. D. Fugelsath of Minneapolis had been a user of Eagle White Lead for many years. His contract for painting the Minnehaha Lodge Building also called for the painting of a considerable amount of metal. When he ordered his requirements of Eagle White Lead, The Eagle-Picher Lead Company recommended Sublimed Blue Lead in Oil for this metal protection.

Mr. Fugelsath used Sublimed Blue Lead in Oil, and of it has this to say:

"I have used your Eagle White Lead for many years. I used your Sublimed Blue Lead in Oil on all the metal work on the Minnehaha Lodge Building, and I am very much pleased to say that the results I obtained with Sublimed Blue Lead in Oil proved to me that this product is superior to any metal primer that I have ever used."  
—Con. D. Fugelsath.

The durability of Sublimed Blue Lead has been proven both in the field and on the Atlantic City Test Fence, judged by the American Society for Testing Materials.

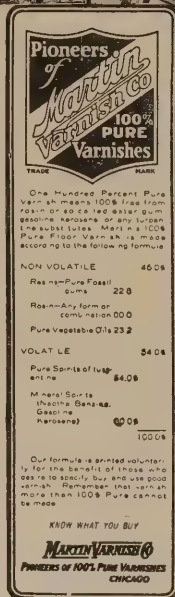
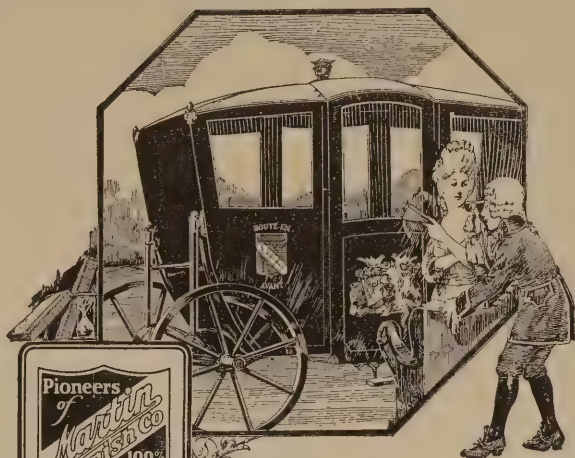
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# EAGLE Picher Sublimed BLUE LEAD in OIL

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## "The Marquis Was Speechless"

"— Nothing more magnificent and more refined at once had ever met his gaze. On the four principal panels were the arms of the Du Barrys, with the famous war-cry, 'Boute en avant.'"

"Upon each of the side-panels was a basket of roses on which two doves were tenderly pecking at each other, the whole varnished with the Martin Varnish, the secret of which is lost now."

"The carriage cost fifty-six thousand francs.  
"Has the king seen the superb gift, Madame la Comtesse?" asked the Marquis de Chauvelin.  
"Not yet, but I am sure of one thing."  
"Of what are you sure? Let us hear."  
"That he will be charmed with it."

Extract from "MONSIEUR DE CHAUVELIN'S WILL"  
by Alexander Dumas, (Handy Library Edition), Copyright 1897.

## Martin's 100% Pure Varnish

is today manufactured of Pure Gums, Pure Oil, and Pure Turpentine—No Rosin—No Benzine. Because of these quality ingredients Martin's 100% Pure Varnish gives a finish that cannot be excelled.

We make no secret about the ingredients used in the manufacture of Martin's 100% Pure Varnish. Because of this fact we are putting the formula on every package so that you and your customers will know what you are buying. This formula is your protection—a guarantee of a quality finish—economy and durability.

**MARTIN VARNISH CO.**  
PIONEERS OF 100% PURE VARNISHES  
CHICAGO

## The O'Brien Floor Finish —won't check, blister or peel

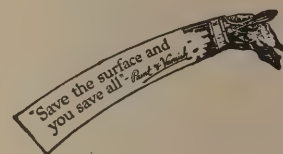
PYRAMID Floor Finish is of the highest grade obtainable in floor finishes. It can be used on all types of wood floors and over linoleums or similar floor coverings. It is especially adapted to use in hospitals, hotels, schools and all other public buildings of a similar nature where the wear on floors is unusually severe.

Pyramid emphasizes the natural beauty of the grain. It is thoroughly waterproof and mar proof. It works freely from the brush and has a covering capacity far above the average. It is noted for its remarkable toughness and elasticity.

When written into your specifications, Pyramid Floor will give your clients absolute assurance of satisfactory results.

O'BRIEN VARNISH COMPANY  
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Booklet and Color Card, the  
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PHILADELPHIA

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## FILTEX

*A Practical First Coater*

*The American Radiator  
Building, New York*

*Raymond M. Hood  
Architect, New York*

A wall finish consistent with the beautiful exterior has been obtained in the American Radiator Building by using Filtex, an unusual, transparent, pigment first coater. Filtex forms a smooth and impervious film which eliminates suction. It holds out the finishing coats of flat wall paint or varnish on any surface.

*Save the surface and  
you save all the money.*

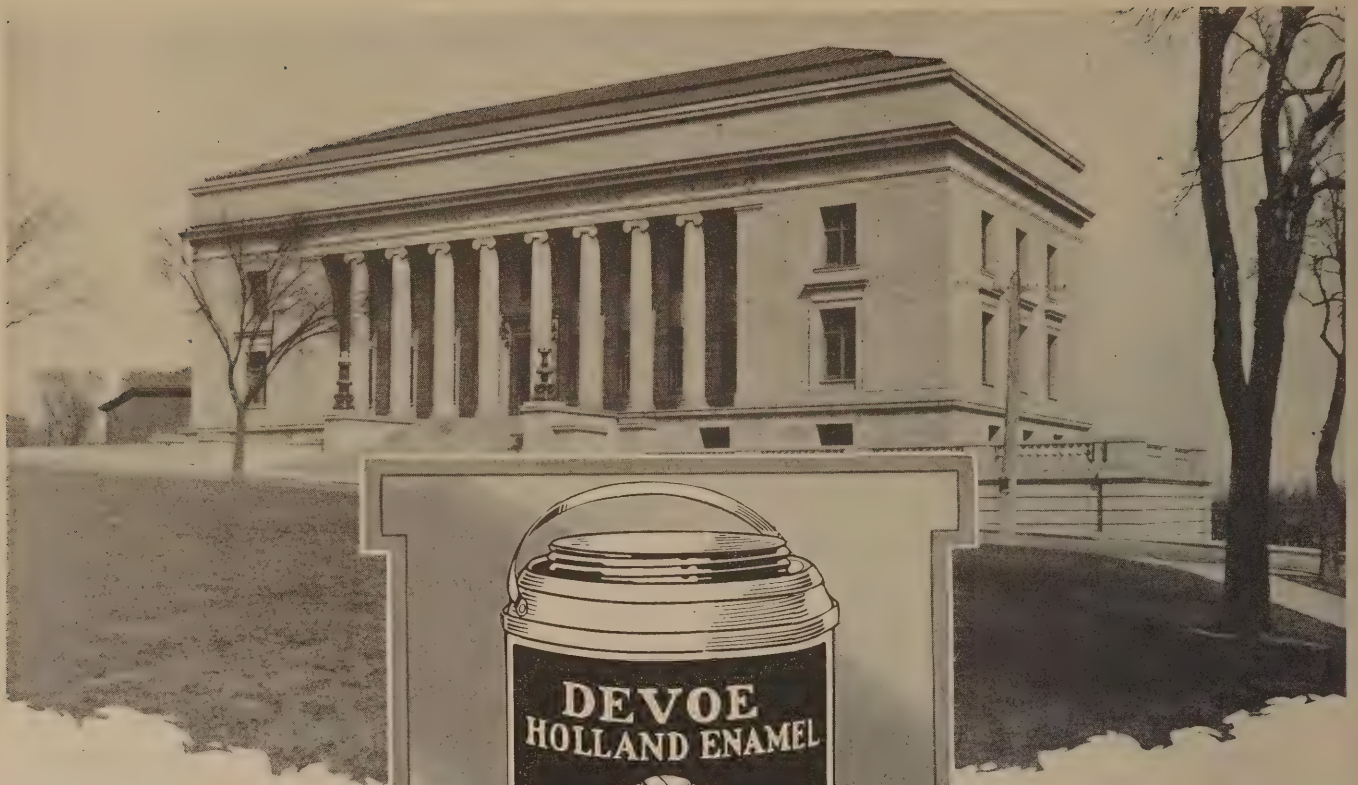
*The Pratt & Lambert Architectural Service Department is at  
your service. Let us help you with your wood-finishing problems.*

*Save the surface and  
you save all the money.*

PRATT & LAMBERT-INC., 122 Tonawanda St., Buffalo, N. Y., In Canada: 34 Courtwright St., Bridgeburg, Ontario.

### PRATT & LAMBERT VARNISH PRODUCTS





State Historical Building, St. Paul, Minn.  
Clarence H. Johnston, St. Paul, Minn.  
Architect

Finished throughout with Devoe Paint  
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AS much as it is a disappointment to specify an enamel that yellows instead of mellows with age, it is also a gratification to specify an enamel whose pure ingredients assure its whiteness in old age.

In Devoe Holland Enamel you get such assurance. For the pigment is pure French Process Zinc, ground and reground, floated, bolted and bleached. The vehicle is the highest grade pure linseed oil, selected for quality and paleness;

then aged, settled, clarified, bleached, bodied and filtered.

That is why in severe exterior use, or subjected to steam water, and frequent washings, in kitchens and bathrooms, Devoe Holland Enamel retains its whiteness imperturbed by time or trials.

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# ARCHITECTS' GUIDE

FOR PAINTING · VARNISHING · STAINING AND ENAMELING

IMPORTANT: Each of the products specified below bears our name and trade mark

SURFACE	TO PAINT <i>Use product named below</i>	TO ENAMEL <i>Use product named below</i>	TO STAIN <i>Use product named below</i>	TO VARNISH <i>Use product named below</i>
BRICK WALLS (ext).....	S-W Concrete Wall Finish	Old Dutch Enamel, Gloss		
CONCRETE WALLS.....	S-W Concrete Wall Finish	Old Dutch Enamel, Gloss		
CEMENT FLOORS.....	S-W Concrete Floor Paint	S-W Concrete Floor Paint		
EXTERIOR WOOD SURFACES.....	SWP (Sherwin-Williams Prepared Paint)	Old Dutch Enamel, Gloss	S-W Preservative Shingle Stain S-W Acid or Oil Stain	Rexpar Varnish
EXTERIOR METAL SURFACES.....	Kromik Structural Steel Primer Metalastic (for finishing coats)	Old Dutch Enamel, Gloss		
FACTORY WALLS (Interior).....	S-W Eg-Shel Mill White S-W Fume Resisting White	Old Dutch Enamel or Enameloid		
FLOORS (Interior Wood)...	S-W Inside Floor Paint (the enamel-like finish)	S-W Inside Floor Paint (the enamel-like finish)	Oil Stain or Floorlac Varnish Stain	Mar-Not Floor Varnish
GALVANIZED IRON SURFACES.....	S-W Galvanized Iron Primer (Finish with any Paint)	S-W Galvanized Iron Primer and Old Dutch Enamel		
INTERIOR WALLS AND CEILINGS.....	Flat-Tone Wall Finish S-W Eg-Shel Mill White	Old Dutch Enamel or Enameloid		
INTERIOR WOOD TRIM.....	SWP (Sherwin-Williams Prepared Paint)	Old Dutch Enamel or Enameloid	S-W Acid Stain S-W Handcraft Stain S-W Oil Stain	Scar-Not Varnish Velvet Finish Varnish (for imitation rubbed effect)
PORCH FLOORS AND DECKS.....	S-W Porch and Deck Paint			
RADIATORS AND PIPES.....	Flat-Tone Wall Finish or S-W Gold Paint S-W Aluminum Paint	For White—S-W Snow White Enamel For colors—Enameloid		
ROOFS—Metal.....	SWP or Metalastic (if Galvanized, prime with S-W Galvanized Iron Primer)			
ROOFS—Wood Shingle...	SWP		S-W Preservative Shingle Stain	
STACKS AND HOT SURFACES.....	Salamander Smoke-Stack Black			
STRUCTURAL STEEL..	Kromik Structural Steel Primer Metalastic (for finishing coats)			
TO DAMP-PROOF FOUNDATIONS....	S-W Antydamp			
TO DAMP-PROOF INTERIOR WALLS ABOVE GRADE....	S-W Plaster Bond			
WOOD PRESERVATIVE			S-W Carbolic-ol	

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Walls finished with Cabot's Double-White; roof stained with Cabot's Creosote Stain. Rollin C. Chapin, architect, Minneapolis.

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A really FLAT white—no shine—with a fine texture, and whiter than any lead and oil paint. Two coats cover as well as three coats of white paint. A distinctly new white for those who seek quality, beauty and economy.

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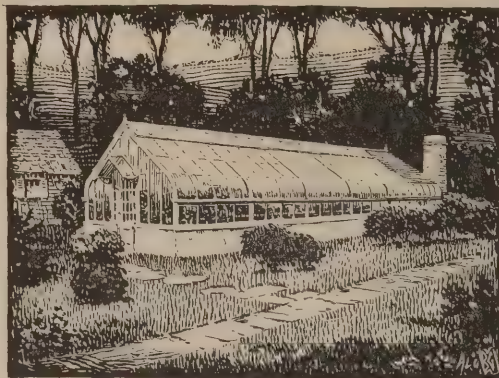


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# RIPOLIN

THE ORIGINAL HOLLAND ENAMEL PAINT

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Come to

**Hitchings and Company**

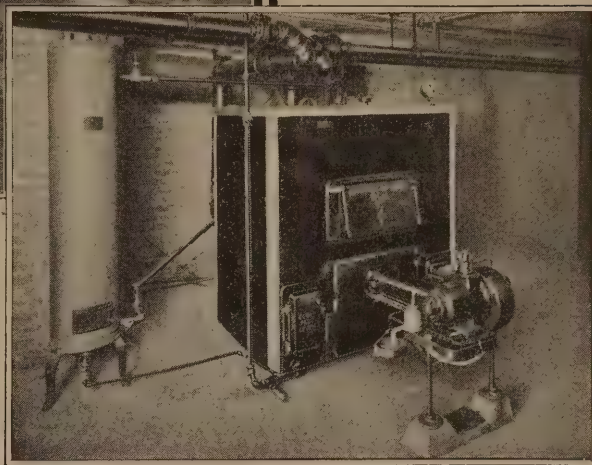
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No less advanced is the method of warming the house, for ideal heating is supplied by an IDEAL TYPE A Heat Machine and CORTO Radiators. (Mr. Clay equipped the machine with an oil-burner. The TYPE A and other IDEAL Boilers can be readily adapted for efficient oil burning.)

Nearly 1200 feet of hot-water radiation is supplied by the Heat Machine, and the service rendered during the past winter, the owner states, has justified his best expectations.

The IDEAL TYPE A Heat Machine—an aristocrat in appearance—is a working aristocrat in performance. It soon pays back its cost in the coal that it saves. That alone makes it worthy of your specification.

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# SERVICE SECTION of THE ARCHITECTURAL FORUM

Information on economic aspects of construction and direct service for architects on subjects allied to building, through members of THE FORUM Consultation Committee

## The Mid-Year Building Situation

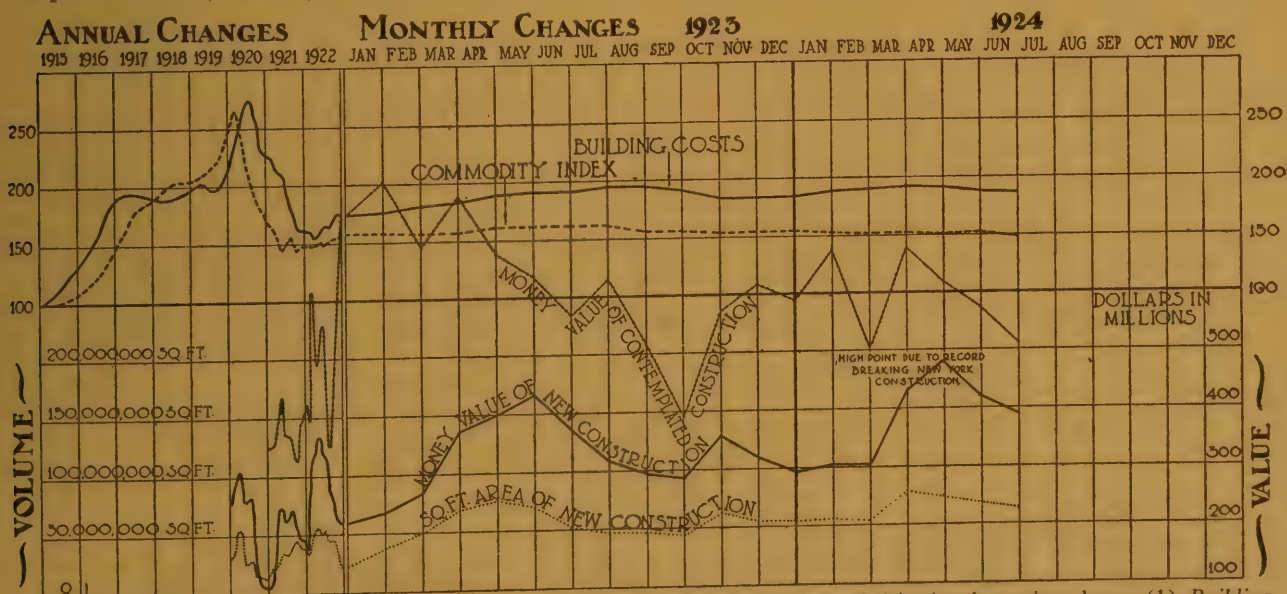
THE record of building contracts placed during the first six months of 1924 now being available makes it possible to analyze the first half of what promises to be the largest building year in the history of the construction industry. Running through figures of the F. W. Dodge Company covering 36 Eastern states and adding the estimated amount of construction in the rest of the United States, there have been started in this country during the first six months of 1924 contracts amounting to over two and a half billion dollars. This is a record figure, being a 10 per cent increase over the first half of 1923.

The accompanying chart shows a monthly comparison of building activity in the 36 Eastern states covered by the Dodge figures. It will be noted that the total amount of money invested in new buildings has been greater in each month of 1924 than in 1923, except in the month of May. The month of June has shown a good record, contracts having been started in these 36 states amounting to nearly \$400,000,000, which is a decline of a little less than 8 per cent from the May figures and an increase of

almost 5 per cent over those of June of last year.

An important fact must be recognized, however, that the record figure for the first six months of this year is not representative of construction throughout the country. The New York and Southeastern districts have shown substantial increases, with record-breaking activity in New York City. In New England the increase has been moderate; the Middle Atlantic states have just equaled last year's record, and the Pittsburgh, Central Western and Northwestern districts have shown substantial declines in activity. All the important classes of construction, except the industrial class, have participated in the increase in construction volume. Industrial construction has declined considerably. Recapitulating the six months' record, the important building groups were thus represented:

Forty-eight per cent of the total for residential buildings; 15 per cent for public works and utilities; 13 per cent for commercial buildings; 8 per cent for educational buildings, and a little under 8 per cent for industrial buildings. Figures quoted are from the statistics of the F. W. Dodge Company.

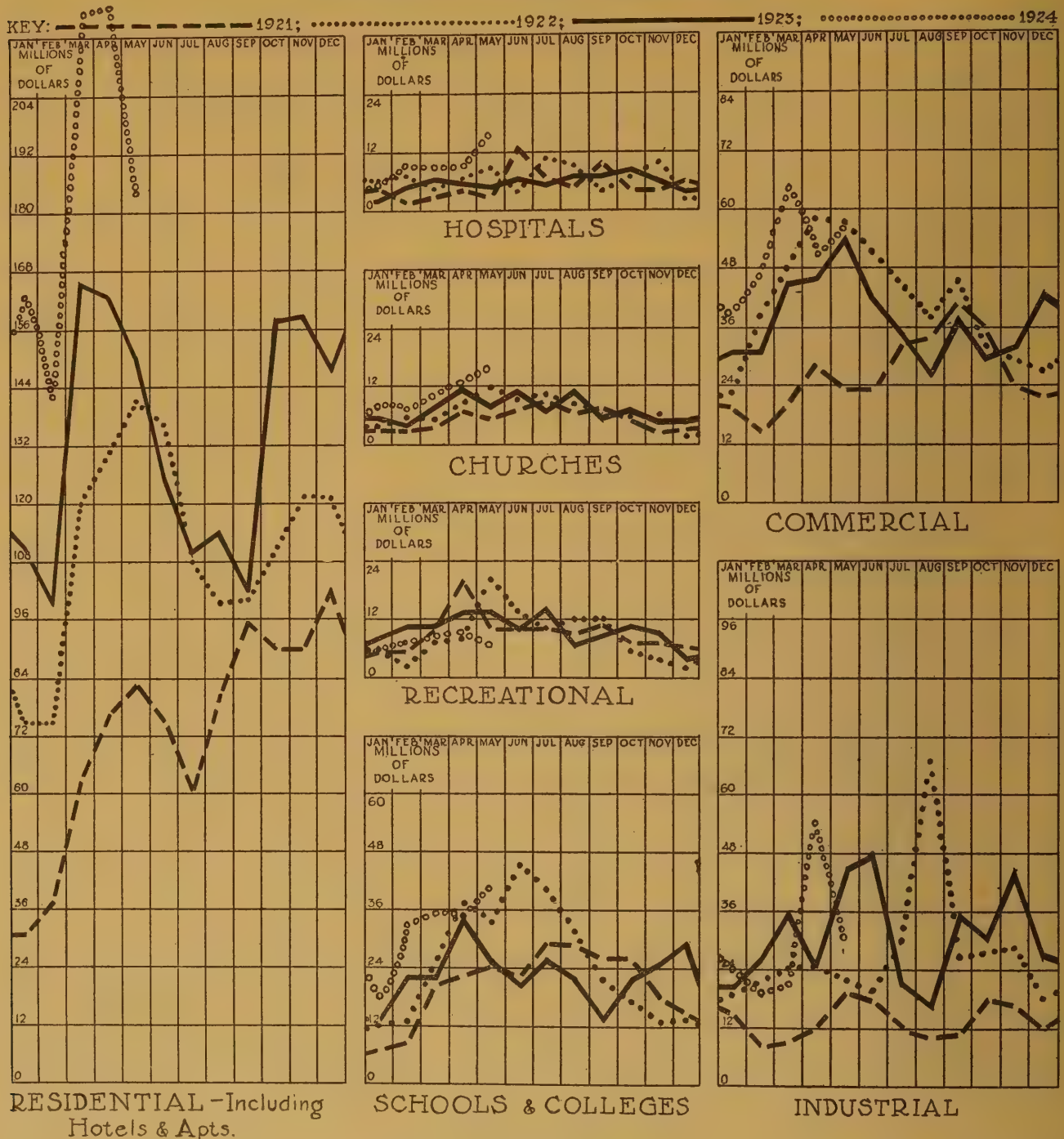


THESE various important factors of change in the building situation are recorded in the chart given here: (1) *Building Costs*. This includes the cost of labor and materials; the index point is a composite of all available reports in basic materials and labor costs under national averages. (2) *Commodity Index*. Index figure determined by the United States Department of Labor. (3) *Money Value of Contemplated Construction*. Value of building for which plans have been filed based on reports of the United States Chamber of Commerce, F. W. Dodge Co., and *Engineering News-Record*. (4) *Money Value of New Construction*. Total valuation of all contracts actually let. The dollar scale is at the right of the chart in millions. (5) *Square Foot Area of New Construction*. The measured volume of new buildings. The square foot measure is at the left of the chart. The variation of distances between the value and volume lines represents a square foot cost which is determined first, by the trend of building costs, and second, by the quality of construction.



# Monthly Analysis of the Trend of Building Activity

A study of the value of contracts let each month in seven important types of buildings—with graphic comparisons for the three preceding years



## MAY 1924 CONTRACTS

IN order that a comparison of monthly activity may be made at a glance, the value of contracts let is presented in the above graphic charts. This information is based on data obtained through the United States Chamber of Commerce and the F. W. Dodge Company. The activity of each year is shown by a special line according to the key indicated at the top of the page. Thus, on each chart the activity in the form of Money Value of Con-

tracts Let may be followed through from January, 1921, to the most recent month for which figures were available when this page was printed. Not only is a rapid comparison provided of the total activity each year, but the relative activity for each month can be estimated by referring to the index figures representing millions of dollars as shown at the left of each chart. Reports cover about three-quarters of the total building in the United States.

# BUILDING MATERIAL PRICES

Table Showing Average Prices Paid by Contractors for Building Materials at Local Distributing Points as of June 1, 1924. Prepared by Division of Building and Housing of the Bureau of Standards from Prices Secured through the Bureau of Census

Commodities	Size or Condition	Unit	Fitch-burg	Haverhill	New London	Pitts-burgh	Erie	Scranton	Balti-more	Wash-ington	Rich-mond	Fair-mont	Co-lumbia	Savannah	Bay City	Shreve-port	New Orleans	Grand Forks	St. Louis
Common brick	Excl. of containers	1,000 Bbl.	23.00	26.50	27.00	17.00	16.75	26.00	20.00	2.80	17.00	24.00	12.00	14.00	17.50	16.00	17.50	13.50	18.00
Portland Cement	Dimensions 2x4-16'	SISTE. M	3.25	3.40	3.43	3.10	3.40	3.00	3.00	2.80	3.20	2.75	3.50	2.95	3.40	2.50	3.20	3.40	2.80
Yellow Pine No. 1	Dimensions 2x4-16'	SISTE. M	...	...	...	54.00	50.00	...	37.50	...	32.00	...	...	...	43.00	45.00	40.00	52.00	47.00
Douglas Fir No. 1	Dimensions 2x4-16'	SISTE. M	50.00	45.00	45.00	52.00	52.00	...	38.00	...	32.00	52.00	25.00	30.00	43.00	55.00	45.00	48.00	47.00
N. Carolina Pine No. 1	Dimensions 2x4-16'	SISTE. M	110.00	126.00	110.00	...	50.00	...	136.00	...	110.00	100.00	90.00	...	...	106.00	105.00	95.00	85.00
Common Boards No. 1	1x6	M	6.50	6.20	6.00	6.50	6.75	...	10.40	...	6.20	7.25	...	...	6.50	6.00	6.75	6.80	4.80
Douglas Fir V. G. No. 2	1x4-10'-16'	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Red Cedar Shingles	Extra Clear 16" 5 to 2	100 sq. ft.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cypress Shingles	Extra Clear 16" 5 to 2	100 sq. ft.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Composition shingles	Crushed Slate Surfaced	1,000 sq. ft.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gypsum plaster board	3/8"	100 sq. ft.	30.00	45.00	50.00	37.50	45.00	32.50	14.25	16.00	19.50	16.00	20.00	50.00	30.00	40.00	45.00	32.00	24.00
Lime	Hyd.	Ton	25.00	20.00	26.00	24.00	22.00	22.00	2.30	...	1.89	3.70	1.25	1.50	2.75	2.25	2.00	3.85	1.20
Building sand	3/4"	Ton	3.25	2.50	1.65	2.50	3.04	...	...	...	2.35	2.75	2.75	3.25	2.35	3.00	3.25	2.70	2.70
Crushed stone	3/4"	Ton	4.00	4.40	4.75	5.50	3.50	...	3.60	...	2.35	3.90	4.25	3.90	3.75	3.65	4.00	3.85	5.50
Wire nails	Single A 10"x12"	50 sq. ft.	4.50	4.27	4.27	5.95	3.15	...	3.90	...	5.80	4.40	...	...	4.80	5.00	5.12	5.40	5.40
Window glass	8"x12"x12"	Each	.30	.30	.32	18	.21	.25	...	...	...	...	.17	.15	...	.16	.22	.23	.19
Hollow tile	4" E.H. 13 lbs. per ft.	Ton	...	...	...	60.00	...	60.00	...	...	64.90	88.00	...	...	72.30	80.00	69.80	117.00	...
Cast iron soil pipe	1" galv.	100 ft.	...	...	...	9.86	...	...	...	...	10.00	10.50	11.87	...	10.70	10.50	11.95	9.53	...
Steel pipe	4" square.	100 lbs.	3.50	...	...	3.43	...	...	...	3.67	3.50	3.50	4.60	...	3.35	3.50	4.00	3.75	5.40
Reinforcement bars	Fab. 6" I beams	100 lbs.	...	...	...	3.25	...	...	...	...	4.00	5.00	4.85	...	6.00	5.25	6.50	3.90	5.40
Structural steel	Dry	100 lbs.	13.50	14.50	15.00	15.00	...	...	13.20	...	15.00	12.50	15.75	15.00	14.00	15.75	12.50	17.00	...
White lead	Am. process lead free	100 lbs.	...	...	...	15.00	...	...	...	...	...	...	...	...	15.25	...	...	...	...
Zinc oxide	Neat	Ton	24.00	...	...	22.00	24.00	21.00	19.00	20.00	...	19.00	19.00	1.02	21.00	16.40	24.00	21.00	14.50
Gypsum plaster	Neat	Ton	1.05	1.05	1.35	.98	...	1.05	...	...	...	.98	1.10	1.00	1.10	1.40	1.00	1.50	1.05
Linsed oil	No. 1 ribbon	Gal.	...	...	...	14.25	...	...	...	...	...	13.00	...	...	2.65	2.85	2.75	3.25	3.75
Roofing slate	2-ply 75 lbs. per roll of	100 sq. ft.	...	2.75	...	...	...	...	...	...	...	1.65	...	...	1.00	1.25	...	2.00	1.50
Tar paper, roofing	3-ply 30 lbs. per roll of	500 sq. ft.	...	1.60	...	1.45	1.50	...	...	...	...	...	...	...	1.00	1.25	...	2.00	1.50
Rosin sized sheathing																			
Commodities	Size or Condition	Unit	Pough-keepsie	Syracuse	Roche-ster	Buffalo	Cleve-land	Akron	Lorain	Co-lumbus	St. Paul	Water-loo	South Bend	Spo-kane	Portland, Ore-gon	Mil-wau-kee	San An-tonio	Los An-ges	
Common brick	Excl. of containers	1,000 Bbl.	20.00	20.00	18.75	23.00	16.00	16.00	21.00	17.00	14.50	16.50	20.00	16.50	15.50	13.00	17.50	15.50	15.50
Portland Cement	Dimensions 2x4-16'	SISTE. M	2.70	3.30	3.35	3.03	3.40	3.20	3.40	3.20	2.80	2.90	3.00	...	2.90	3.00	2.60	3.60	2.76
Yellow Pine No. 1	Dimensions 2x4-16'	SISTE. M	48.00	55.00	46.00	55.00	59.00	45.00	55.00	45.00	49.00	50.00	53.00	...	...	38.00	55.00	60.00	29.50
Douglas Fir No. 1	Dimensions 2x4-16'	SISTE. M	47.00	...	...	60.00	...	...	...	...	...	...	...	27.00	...	38.00	...	...	...
N. Carolina Pine No. 1	Dimensions 2x4-16'	SISTE. M	47.00	42.00	46.00	...	...	...	...	45.00	48.00	45.00	...	...	...	...	...	...	...
Common Boards No. 1	1x6	M	40.00	39.00	40.00	50.00	49.00	45.00	50.00	115.00	90.00	96.00	105.00	26.00	...	38.00	55.00	55.00	28.00
Y. P. Flooring Edge Grain "C"	1x4-10'-16'	M	130.00	105.00	112.00	85.00	92.00	85.00	105.00	96.00	90.00	96.00	105.00	75.00	...	...	105.00	90.00	62.75
Douglas Fir V. G. No. 2	1x4-10'-16'	M	...	...	...	115.00	...	6.00	6.50	5.80	6.25	6.00	6.25	...	...	3.50	6.00	5.00	3.58
Red Cedar Shingles	Extra Clear 16" 5 to 2	100 sq. ft.	...	6.25	6.00	6.75	...	...	...	...	...	...	...	...	...	...	7.50	...	...
Cypress Shingles	Extra Clear 16" 5 to 2	100 sq. ft.	...	6.00	...	...	6.75	6.00	...	...	7.00	6.50	7.75	...	...	6.25	9.00	...	...
Composition shingles	Crushed Slate Surfaced	1,000 sq. ft.	...	...	...	...	...	...	...	45.00	32.00	38.00	50.00	...	...	40.00	40.00	40.00	35.00
Gypsum plaster board	3/8"	100 sq. ft.	50.00	32.50	30.00	45.00	20.00	20.00	18.00	16.00	21.00	20.00	...	...	...	18.00	20.00	20.00	26.00
Lime	Hyd.	Ton	26.00	20.00	20.00	16.00	20.00	2.00	3.00	3.50	1.50	1.75	2.10	...	...	25.00	17.50	1.25	1.75
Building sand	3/4"	Ton	2.50	1.80	2.75	1.48	2.50	2.00	3.00	3.50	2.00	3.00	3.75	...	...	1.75	2.25	3.50	3.10
Crushed stone	3/4"	Ton	2.40	2.25	2.85	1.35	3.50	3.65	2.65	3.50	2.00	3.00	5.00	4.85	...	4.50	3.80	5.50	4.38
Wire nails	Single A 10"x12"	50 sq. ft.	5.05	4.10	4.25	4.25	3.65	3.65	3.95	4.50	6.88	5.25	6.00	4.43	...	4.50	5.50	5.50	4.38
Window glass	8"x12"x12"	Each	...	.25	.18	.20	...	.17	.19	.17	.13	.17	.15	...	...	.16	.20	.18	.20
Hollow tile	4" E.H. 13 lbs. per ft.	Ton	...	80.00	73.05	63.05	73.46	78.50	...	...	11.19	12.00	12.00	103.00	...	113.00	112.50	83.80	...
Cast iron soil pipe	1" galv.	100 ft.	...	10.51	10.52	10.51	10.90	10.36	...	10.47	11.19	12.00	12.00	12.15	...	10.00	11.12	11.30	...
Steel pipe	4" square.	100 lbs.	...	4.00	3.50	2.65	3.35	3.90	4.35	3.50	3.00	4.00	4.50	4.15	...	4.00	3.60	4.25	4.25
Reinforcement bars	Fab. 6" I beams	100 lbs.	4.50	4.00	3.50	3.65	3.35	3.75	4.15	3.60	4.00	4.95	5.00	...	...	5.00	4.50	6.00	...
Structural steel	Dry	100 lbs.	5.00	4.85	4.25	3.65	...	...	...	14.00	15.13	14.50	14.00	13.75	...	...	16.00	14.00	...
White lead	Am. process lead free	100 lbs.	14.25	13.50	13.50	15.00	15.00	15.00	17.50	17.00	15.00	18.00	20.00	16.00	...	...	16.00	16.00	14.00
Zinc oxide	Neat	Ton	...	...	...	...	...	19.00	17.50	...	...	...	...	...	...	...	...	...	...
Gypsum plaster	Neat	Ton	18.00	19.25	18.00	17.00	...	19.00	1.03	...	1.08	1.15	1.25	1.08	...	2.00	24.05	20.00	17.80
Linsed oil	No. 1 ribbon	Gal.	...	1.05	1.30	1.08	1.09	1.03	...	12.50	9.8	...	...	...	...	1.25	17.50	17.60	...
Roofing slate	2-ply 75 lbs. per roll of	100 sq. ft.	...	14.00	13.00	...	2.50	13.50	...	...	...	...	...	2.82	...	...	...	3.50	...
Tar paper, roofing	3-ply 30 lbs. per roll of	500 sq. ft.	...	2.25	2.75	2.00	...	2.70	...	...	...	...	...	2.82	...	...	...	3.25	...
Rosin sized sheathing			...	1.50	1.35	1.35	...	...	...	1.40	1.55	1.40	1.50	1.29	...	1.80	1.15	1.80	1.50



# THE FORUM CONSULTATION COMMITTEE

A group of nationally known experts on various technical subjects allied to building, providing a direct service to architects

THE editors of THE ARCHITECTURAL FORUM have been fortunate in obtaining the cooperation of the following recognized experts who constitute THE FORUM Consultation Committee. This Committee provides a service of the greatest value to subscribers in addition to the usual editorial service, and architects who seek information on specific questions in these various fields are invited to present inquiries.

The basis on which this Committee has been organized is:

- (a) That each committee member shall be a representative leader in his line;
- (b) That no committee member has affiliations with any manufacturer;
- (c) That no committee member will be called upon for detailed service excepting by special arrangement;
- (d) That a special editorial article on a subject represented under each of the headings below shall be prepared during the year by the committee member.

## SUBJECTS AND COMMITTEE PERSONNEL

### HOTEL DESIGN AND EQUIPMENT

DANIEL P. RITCHEY

Known in the hotel field as the "hotel doctor," Mr. Ritchey, who is an engineer as well as an experienced hotel owner and manager, is qualified to answer any questions which may arise in this connection.

### FINANCE

WALTER STABLER

Comptroller, Metropolitan Life Insurance Co.

The largest institution in the United States making loans for building construction. Mr. Stabler's knowledge of building investments covers the country and is widely recognized.

### HEATING AND VENTILATING

CHARLES A. FULLER

Consulting, Heating and Ventilating Engineer

Member of firm of Griggs & Myers, New York. Widely experienced in the field of heating and ventilating design for office buildings, institutions and industrials; specialist on investigation and report work on mechanical equipment for new and old plants.

### REAL ESTATE

C. STANLEY TAYLOR

Widely experienced in real estate development and financing, real property law, architecture, engineering and building construction. Financial and Business Editor of THE ARCHITECTURAL FORUM.

### ELECTRICAL SCIENCE

WILLIAM L. GOODWIN

Vice-president of the Society for Electrical Development

This Society is organized to promote accurate knowledge of the practical application of electricity. Its activities extend from the simple problems of household equipment to highly developed electrical plants. Particular attention is given the development of provision for electrical service in buildings.

### FIRE PROTECTION ENGINEERING

J. D. HUNTER

Chief Engineer, Marsh & McLennan, Insurance Brokers, New York

Specialist in insurance engineering as applied to building design, construction and equipment.

### SAFETY ENGINEERING

S. J. WILLIAMS

Secretary and Chief Engineer, National Safety Council, Chicago

Safety engineering is an important factor in the design of buildings where large groups of people congregate. The National Safety Council has investigated construction and devices with the greatest minuteness.

### BUILDING MANAGEMENT

J. CLYDESDALE CUSHMAN

President, Cushman & Wakefield, Inc., Real Estate, New York

Mr. Cushman's firm has participated largely in the promotion and operation of many large New York buildings. His specialty is the management of office buildings.

### GAS SERVICE AND UTILIZATION

NILS T. SELLMAN

Service Engineer, American Gas Association

A specialist in problems pertaining to gas service and its use in all classes of buildings and industries.

# THE FORUM DIGEST

A SURVEY OF IMPORTANT CURRENT ARTICLES ON BUILDING ECONOMICS AND BUSINESS CONDITIONS AFFECTING CONSTRUCTION

The Editors of this Department select from a wide range of publications matter of definite interest to Architects which would otherwise be available only through laborious effort

## Analysis of Mid-Year Building Conditions

WHEN analyzing the contract records for the first six months of 1924 it is also of interest to consider the variations of building costs. The variation of the cost trend line as estimated by THE ARCHITECTURAL FORUM will be found in the chart on the first page of this Service Section. Another record cost fluctuation is maintained by *Engineering News-Record* in the form of an index number based on variations in the costs of steel, lumber, cement and common labor. This index would naturally be higher and vary more than a composite index including many more factors, but it is quite interesting to examine its trend for the first six

months of 1924 as compared with those first six months of 1923. Accompanying this article will be found a chart showing the cost variation under an index figure built up of the four factors already mentioned.

Just how much building activity may be anticipated in the second half of 1924 is problematical, but general conditions indicate that while the crest of the wave of speculative building is past, a number of substantial deferred projects will come into the market. This forecast is justified from reports in many architects' offices, which indicate that many high class projects are being reconsidered by owners who were frightened out of the market by increasing costs and by the great demand of material and labor due to construction of a more speculative nature. The general building situation throughout the country may be gauged to a certain extent by these opinions received from Federal Reserve Banks in the various districts as reported July 1:

### New York District

"Contracts for building construction awarded during May in 36 states were 13 per cent smaller than in April and 3 per cent smaller than in May a year ago, according to the F. W. Dodge Company. The decline from April resulted chiefly from a decrease of 35 per cent in the New York District, following the very large reduction during April in building permits issued in New York City. For all other reporting sections awards in May were practically the same as in April.

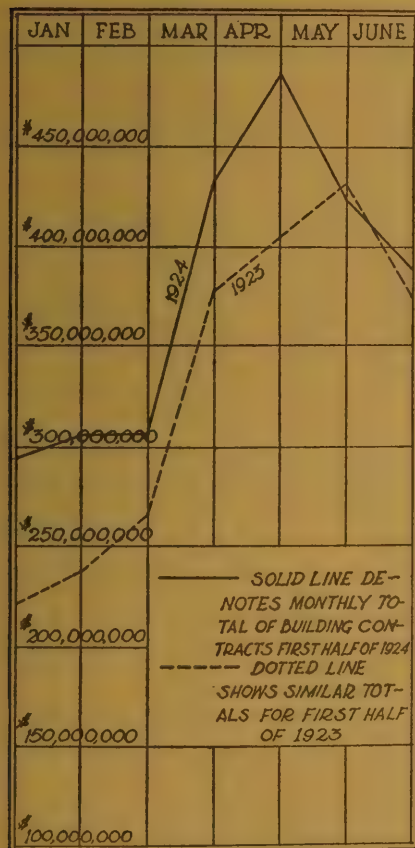
"The decline in the New York District was due largely to a further decrease in residential awards, which accounted for 49 per cent of the total construction in May, compared with an average of 60 per cent in the preceding four months. Both in this district and in other reporting districts, however, residential awards continued to be larger than last year.

"Notwithstanding the considerable decline in May, the monthly average of total contracts awarded throughout the country during the first five months of this year was 12 per cent larger than for the corresponding

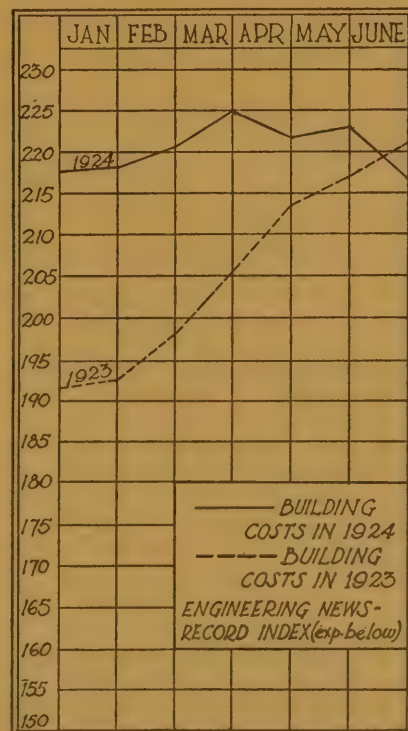
period of last year. A diagram given here, comparing the average monthly contract awards both by sections of the country and by types of construction, indicates the importance of residential building, particularly in the New York District, in these totals."

### Philadelphia District

"Declining building activity in May and June, probably slightly less than in similar period last year. Demand for building materials is not as strong as it was in the spring season of 1923, and in general building projects are not as large in size or in general of as high a quality as during the past year. There is a fair supply of skilled and unskilled workers in the building industries and in manufacturing plants. It is anticipated that there will be a considerable development of activity in the fall of 1924."



Comparison of values of building contracts in first half of 1923 and of 1924, latter showing 10 per cent greater activity; bulk of increase in New York. Figures, F. W. Dodge Co.



Comparison of building costs, first six months 1923 and 1924, based on fluctuations in prices of steel, Portland cement, lumber, and common labor. From *Engineering News-Record* Index.



### New England District

"Contracts awarded in May show a considerable increase over April and a higher total than in May of 1923. Business and industrial building was considerably less than in May of last year, but residential and institutional building has shown an increase."

### Minneapolis District

"Prospective building activity, as evidenced by the valuation of building permits granted in 18 cities of this District, was 12 per cent greater in May than in April. The number of permits granted was about the same in both months, and as a result the average building permit, which furnishes a good test of the state of business confidence, increased in size, although normally there is little change at this time of year. As compared with May a year ago, both the number and valuation of permits granted during May were more than one-fifth smaller."

"The city real estate situation in this District on June 1, according to the semi-annual report of the National Association of Real Estate Boards, was in a state of equilibrium between supply and demand. In the majority of the cities reported for, there was neither a shortage of structures, either for residential or business purposes, nor an over-built condition. Minneapolis was the outstanding exception to this statement. The Minneapolis Real Estate Board reported an over-built condition in small stores and duplexes and no shortage of other types of buildings."

### Cleveland District

"The feeling that the building industry is slackening continues to be quite general. Then, too, activity appears to be centered in the completing of old contracts rather than in the starting of new."

"May operations, however, continued at a high rate, nine representative cities in this District showing an increase in the valuation of permits issued over the same month last year, as against four which showed a decrease. The total valuation of May permits in the 13 cities was \$2,124,846 higher than for May, 1923, or an increase of 9.9 per cent. A slight improvement in weather conditions and the customary seasonal increase were contributing factors in this greater activity."

"In the metropolitan district of Cleveland the May advance was very evident. As compiled by the Builders' Exchange the record for building permits issued in the month of May within the city proper shows 1,890 certificates approved calling for an expenditure of \$6,802,520 in comparison with 1,774 approved at an expenditure of \$4,619,075 for May, 1923. The totals for the first five months of this year aggregate an estimated expenditure in permits is-

sued of \$26,288,515 in contrast with \$24,650,750 for the corresponding five months in 1923. As for individual operations, the total for which permits were issued during the five months this year was 7,380 as against 6,560 in the same period last year, indicating that the variety of building projects is being maintained."

"The story of the suburbs, however, is not so good, a decrease being evidenced for the seven leading suburbs from a total of \$16,582,093 for the first five months of 1923 to \$14,017,247 for the corresponding period this year. It would appear from this that the home-building program is less vigorous than a year ago. The loss in the suburbs is compensated for by the gain in the city proper, so it may be said that the present year, thus far, is running even with its predecessor."

"A decrease is shown in the five months comparison for the District, the valuation of buildings permitted for in 13 cities in the first five months of this year being \$1,489,241 or 1.5 per cent less than for the same period a year ago."

"A more comfortable situation exists in the supply of materials than was the case last year. In some trades there is a slight surplus of workmen, while in others the call is about even with the supply. Wages have not decreased, but it is reported by contractors that a considerable improvement is noted in efficiency on the part of the various workmen."

"The Association of Building Employers reports that the construction industry has enjoyed a peaceful year to date. Many new agreements, some of them extending for two or three years, have been negotiated. In most instances the new rates are higher than the old, but whereas last year bonuses were paid in most of the trades, this year the rates are generally being adhered to. Common labor is reported plentiful, and the supply of skilled labor is equal to the demand with the possible exception of bricklayers and plasterers."

"The costs of some building materials have remained steady while others have shown slight reductions. Favorable weather has improved the demand to some considerable extent."

### St. Louis District

"The value of building permits issued in the five largest cities of the District during May fell sharply below the record total of April, but was only 3.8 per cent under the aggregate of May, 1923. Building operations in the large centers continued at an active pace during the period under review, with residential construction still occupying an important place in the general activity. Reports from the smaller towns and rural districts in the south reflect extensive home-building, particularly of small residences. Road-building has been badly hampered by excessive rainfall, but it is planned to push forward the highway construction programs as soon as weather conditions will permit. The trend of prices of building materials was slightly downward, and many manufacturers have caught up with their orders, with some reporting moderate accumulations."

### Kansas City District

"The reports from cities in the Tenth District indicate that 1924 is the second best year in building since 1919, and probably for all time. During the first five months of the current year a total of 13,826 permits were issued in 18 cities for buildings to cost \$39,741,533. These totals indicate a decrease of 10.4 per cent in the number of permits and a decrease of 21.5 per cent in the estimated cost of construction as compared with the returns for the first five months in 1923, which was the banner year in building history. The 1924 figures, however, exceed those for the five months period in all other years, which is indicated here:

	Cities Reporting	Permits Issued	Estimated Cost
1924 ..	18	13,826	\$39,741,533
1923 ..	18	15,441	50,622,426
1922 ..	19	12,969	37,027,576
1921 ..	18	11,102	26,114,050
1920 ..	18	10,515	38,977,090
1919 ..	16	7,499	17,176,414

"The May returns from the cities show a large volume of building in progress, although the month's totals of permits issued and estimated cost did not come up to the record for the

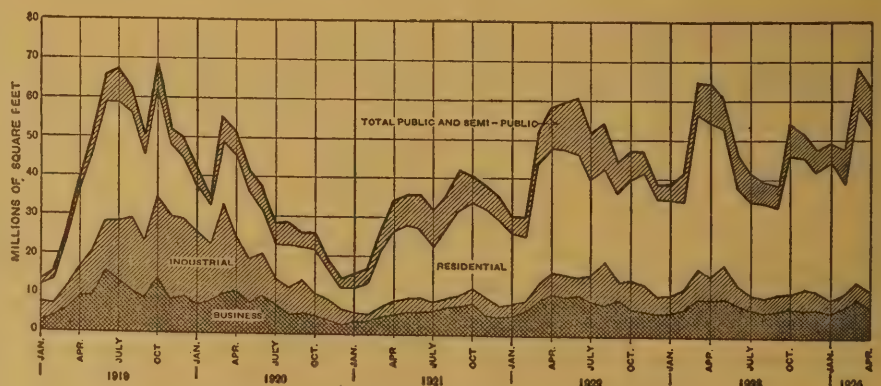


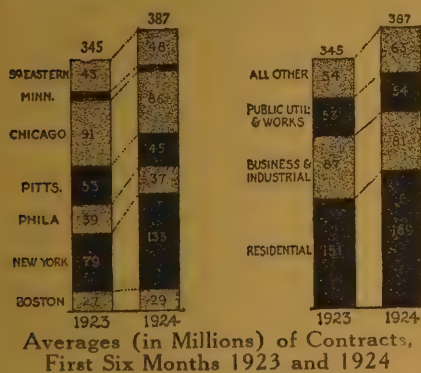
Chart Showing Volume of Building Contracts by Classes  
From Survey of Current Business, June, 1924



fifth month of last year. Unfavorable weather conditions and some unsettlement in the market for building materials were among the factors which had retarded building in these cities. A large number of important buildings are in prospect for the summer and fall season."

### Texas District

"Activity in building operations continued to decline during May, as is evidenced by the decline in building permits issued at 11 of the larger cities of the Eleventh Federal Reserve District. That this decline was general throughout practically the entire district is shown by the fact that Dallas and Fort Worth were the only cities showing an increase in building permit valuations as compared to the previous month, and Beaumont and Dallas were the only cities showing increases as compared to May, 1923. There was a decline of 14.9 per cent in the valuation of permits issued during May as compared to April, and 11.1 per cent as compared with May, 1923. The number of permits issued declined 16 per cent as compared to April, and 14.8 per cent as compared with May, 1923. There were 2,620 permits having a valuation of \$6,231,771 issued during May, which compared to 3,118 permits issued during the previous month having a valuation of \$7,319,650, and 3,075 permits with a valuation of \$7,010,064 issued during the corresponding month of 1923.



"For the third consecutive month the total valuation of permits issued during the period since January 1 was less than that of those issued during the corresponding period of the previous year, there being a decrease of 4.5 per cent as compared with the same period of 1923."

### San Francisco District

"A definite, though slight, downward trend in building activity is indicated by figures of building permits issued in principal cities of this District during recent months. In May, for the second consecutive month, the value of prospective building permitted was less than in the preceding month, and, for the third consecutive month, it was less than in the corresponding month a

year ago. The decline for May, 1924, compared with May, 1923 (18.7 per cent), was greater than the estimated decline of building costs over the same period. The United States Department of Labor index number of building materials prices stood at 180 in May, 1924 (1913 prices=100). This is 1.9 per cent lower than a month ago, and 10.2 per cent less than a year ago (1923 peak). The Aberthaw index number of the total cost of constructing a reinforced concrete factory building stood at 199 on June 1, 1924 (100 in 1915), compared with 200 on May 1, 1924, and 207 on June 1, 1923, the most recent peak."

The general consensus of opinion seems to indicate that the coming fall will introduce another period of considerable activity in the building field, and that 1924 will at least equal the record of 1923 in the amount of money spent in this country for new building construction.

### PLACING STRUCTURAL RESPONSIBILITY

THE joint meeting of architects, engineers, and contractors held in St. Louis recently for the purpose of discussing the relationship and responsibility of the architect and engineer in the matter of safety in building construction, says the *American Contractor*, points to a tendency in these professions that is of profound interest to contractors.

"During the last year several conventions of contractors have discussed the unwillingness of architects to assume full responsibility for their structural designs and for the accuracy of their plans. At the convention of the Associated Building Employers of Michigan, held February 5 at Grand Rapids, N. J. Kennedy assailed those incompetent architects who allowed the whims of owners to dictate the specification of unfit materials and building equipment, who turned out defective or incomplete plans and specifications, or who insisted on having the contractor submit shop drawings of sections of a structure which the architect felt himself incapable of designing.

"Mr. Kennedy pointed out that when contractors have to hire draftsmen to correct poor drawings; when they are forced to design and coordinate structures from incomplete sketches while the architect refuses to surrender any of his authority over the direction of the job and at the same time refuses to assume full responsibility in that direction, a situation exists which is gradually forcing the contractors to enter architectural and engineering practice.

"In view of this and similar adverse criticism the action of the architects and engineers of St. Louis represents a timely move. Certainly if any action is to be taken that will fix firmly on the architect and engineer the responsibility for design,

it is best to have the parties in question initiate the movement.

"At the St. Louis meeting a long discussion occurred on certain phases of responsibility for designs. Nothing definite was decided on except that the meeting had struck on one of the major problems of the building industry.

"The present ill-defined nature of an architect's responsibility goes more deeply into the vital problems of the contracting business than is indicated by the surface manifestation of a score or so of buildings in a state of collapse. At the future meetings of architects, engineers, and contractors the other aspects of the subject ought to be taken up candidly. By cooperative effort a better definition of building responsibility can be laid down and gradually adopted as a standard of practice, thereby not only providing for safety in design but eliminating many basic evils in the construction industry. Hopes for such an outcome may appear to the contractor to border on Utopianism; yet the fact that architects and engineers are seriously questioning their own position is a favorable symptom."

### SIMPLIFICATION OF BUILDERS' HARDWARE

STEPS which will affect the building industry of the entire country were taken in June when manufacturers, distributors and representatives of consumers of builders' hardware, meeting under the auspices of the Division of Simplified Practice in the Department of Commerce, went on record in favor of wholesale reductions in the numbers of sizes, models and finishes of locks and lock trim, butts and hinges and shelf and miscellaneous builders' hardware. The reductions as adopted represent 26 per cent of the 7,000 items manufactured by the leading makers of builders' hardware.

Estimates presented at the meeting by I. J. Fairchild of the United States Bureau of Standards, who has spent a number of months in a study of the problems of the builders' hardware manufacturers, placed the amount to be spent in this item of construction at \$90,000,000 for 1924. He pointed out that in 27 states the building permits for March reached a sum of \$386,483,000, of which an average of 2 per cent, or \$7,730,000 will be spent on builders' hardware. These permits, he said, were divided thus: residences, 53 per cent; educational and other public and semi-public buildings 16½ per cent; business, 15 per cent, and industrial, 5 per cent. The recommendations for eliminations were based on studies of sales records of the principal manufacturers by a special advisory committee which was appointed in November, 1922, when the reduction of excess variety was brought to a focus.



## HOW PROPER INSULATION CUTS FUEL COSTS ONE-THIRD

TODAY, science is helping the home lover to plan and build his home," says *The Permanent Builder*. "Many are the ways he can cut corners and save in material, in space, and labor. Science is really helping to solve the problem because science has discovered so many useful and necessary things for the modern home.

"A few years ago it would have sounded preposterous to say that a man could build a home to save one-third of his fuel bill. This is not a general statement, but a reality. To build a warm, cozy home that will not eat fuel like a glutton is not only possible, but is actually being done by the man who studies his plans and specifications thoroughly. It costs no more to build a home that will save fuel, than one that will not.

"The coal required to heat a house is only that necessary to supply the heat loss through the walls, doors, and windows, due to the difference in temperature between the inside and the outside of the house. Heat is lost from a building in two ways; first, by infiltration, or air leakage, and second, by conduction through the walls, doors and windows. Infiltration losses vary with the building construction, and with the wind velocity outside. A small amount may take place through the walls, but the greater losses are through the cracks and openings around the doors and windows. In the average house it may be assumed that the leakage amounts to one complete air change per hour, and that to take care of this, heat must be supplied each hour to raise the temperature of the air entering from the outside to 70 deg. Fahrenheit. It is logical, of course, that infiltration losses may be partly compensated for by the ventilation, but, as a rule, the air is not brought in at the proper place, nor in the right quantity for ventilation, and the heat so carried away is a total loss.

"Most every building material offers some resistance to the passage of heat and cold; even a thin metal sheet enclosure is somewhat better than nothing. Bricks, wood and plaster have some value, if of sufficient thickness. The construction commonly used in houses is accepted, only because the householder does not realize that it could be made very much better.

"Some years ago, various forms of insulating materials came on the market but they were actually used only in climates which demanded insulation. That is why the word insulation is so common today with the builders in the great northwest.

"Obviously, if a house in the northwest needs to be insulated, to keep out the cold, why should not a house

built in the sunny south also be insulated to keep out the heat? Isn't it worth as much to be cool and comfortable in your own home in summer as to be comfortable and save fuel in winter?

"Now insulating lumber is in wide use in the American and most foreign markets and has met with unheard of success. The wonderful thing about it all is that this insulating lumber is manufactured from sugar cane fiber after the juice has been extracted. Formerly, this cane fiber, or 'bagasse,' as it is called in the south, was used only for a low-grade fuel. It was tough and cumbersome, would not rot, and simply had to be disposed of each year. Now this cane fiber is utilized in making insulated lumber. Tests by leading engineers show that it is one of the poorest conductors of heat known, therefore, its efficiency for insulation. Careful tests which have been made of the passage of heat through the materials commonly used show that their values are known. These values are expressed technically in terms of British thermal units per square foot of surface through one inch of thickness of the material in one hour of each degree difference in temperature. Thus, a piece of insulating lumber 1 foot square and 1 inch thick will permit the passage of 0.3 B. t. u. in one hour, if the temperature on one side is one degree greater than on the other side. With 10 degrees difference the heat loss will be ten times as great, or 3.3 B. t. u. If the insulation is only one-half as thick, the conduction will be twice as great.

"It is very easy to insulate a house with insulating lumber. It is applied to the outside walls of a frame house directly to the outside of the studs taking the place of wood sheathing and building paper. Inside, the insulating lumber may be applied to the studs to serve instead of lath as a base for plaster. In a locality where average prices prevail, the outside layer in place will cost less than sheathing and paper in place. The inside layer will cost somewhat more than the lath but will save some labor and material on the plastering, but the insulation always costs nothing. The two layers combined will practically solve the cost of the items they replace. The owner gets his walls thoroughly insulated at no additional cost above that of uninsulated construction. The attic also should be insulated. One layer of insulating lumber may be put on top of the attic joists. The saving of the lath will largely offset the cost of one layer. Thus the principle of ice house construction is applied to the modern home with the same results.

"It has truthfully been said that insulating lumber has the insulating value of cork. Because insulating

lumber replaces so many other materials in construction today, it is rapidly becoming one of the most important factors in home building.

"When it is considered that approximately one hundred million tons of coal are used each year for heating purposes, it is apparent what a place insulating lumber has made for itself in home building."

## TO COÖRDINATE BUILDING MAINTENANCE WITH NEW CONSTRUCTION WORK

THE Philadelphia Building Congress is the first organization of its kind to officially appoint a Committee on the Coördination of Maintenance and Repairs with new Construction Work.

D. Knickerbacker Boyd, Architect, explains the activities of the congress, which are "to secure the coöperation of owners, managers and occupants in making a survey of the maintenance and repair requirements of buildings and structures in Philadelphia and vicinity, including federal, state and municipal work, to compile and classify such data and to make studies to determine the periods when labor on new construction work is least employed so that in every way possible maintenance work and alterations in existing structures may be done at such times as conflict least with new construction requirements and make for greater continuity of employment."

The Boston Building Congress and then the New York Congress, which in May increased its membership over 1,000 in a week, have been making similar recommendations. Now, however, comes official action by the Building Owners' and Managers' Association of Philadelphia, which after conferring with the Philadelphia Building Congress has taken this formal action:

"Resolved, that the Board of Directors of the Building Owners' and Managers' Association of Philadelphia recommend to all members and to all owners and managers of large buildings in Philadelphia that they defer such of their maintenance and repair work as can be conveniently postponed until such periods during the coming winter as there might be a lull, or easing-off of conditions, in the building and construction industry."

This action is being taken to help reduce the unemployment problem when winter comes again. Seasonal employment is recognized as one of the evils in the labor situation. Large numbers of men, by the nature of their profession or trade, are employed only a part of the year. A brief survey has disclosed that much repair work, now crowded into the summer months, could be done just as easily and perhaps more efficiently during the slack winter period.



# Selected List of Manufacturers' Literature

FOR THE SERVICE OF ARCHITECTS, ENGINEERS, DECORATORS, AND CONTRACTORS

The publications listed in these columns are the most important of those issued by leading manufacturers identified with the building industry. They may be had without charge, unless otherwise noted, by applying on your business stationery to *The Architectural Forum*, 383 Madison Ave., New York, or the manufacturer direct, in which case kindly mention this publication.

## ACOUSTICS

- Johns-Manville, Inc.**, Madison Ave. & 41st St., New York, N. Y.  
Architectural Acoustics. Booklet. 6 x 9 in. 24 pp. Illustrated. Treatise on the correction of architectural acoustics in churches, schools, hospitals, office buildings and other places.
- Macoustic Engineering Company, Inc.**, 323 Bulkley Building, Cleveland, Ohio.  
Acoustics. Folder. 3½ x 6½ in. 2 pp. Not illustrated. Contains brief story of the care in the selection of the architect for the Cleveland Public Hall; the reasons for selecting him; and brief reference to "Sound Direction and Control" principles.
- Offering to Architects. Folder. 8½ x 11 in. 2 pp. Illustrated. Contains comments on acoustics of the Cleveland Auditorium by leading artists; list of buildings treated by Macoustic "Sound Direction and Control" principles; many features as to application, appearance, color treatment, financial saving, and complete explanation of engineering service.
- Expanding Macoustic. Folder. 7¼ x 10 in. 1 Sheet. Illustrated. A sheet containing information as to how an architect can avail himself of the engineering service which we have to offer.

## ASH HOISTS—ELECTRIC AND HAND POWER

- Gillis & Geoghegan**, 544 West Broadway, New York, N. Y.  
General Catalog. 8½ x 11 in. 20 pp. Fully illustrated. Contains specifications in two forms (with manufacturer's name and without). Detail ¼ in. scale for each telescopic model and special material-handling section.
- The Man-Saving Load Lifter. 5¼ x 8½ in. 8 pp. Illustrated. Describes G&G Telescopic and Non-Telescopic Hoists for handling material in factories.

## BATHROOM ACCESSORIES

- The Fairfacts Company**, 234 West 14th St., New York, N. Y.  
Catalog F. 4 x 9 in. 12 pp. Illustrated. Describes full line of china fittings for bathrooms.
- The Perfect Bathroom. Booklet. 3 x 9 in. 12 pp. Illustrated. Shows full line, Biltin and Projecting Types, installed. For architects and clients.

## BOILERS—See Heating Equipment

## BRICK

- Acme Brick Company**, Ft. Worth, Tex.  
Series No. 1  
Architectural designs rendered in Acme Brick. Booklet. 11 x 8½ in. Illustrated. A series of 48 photogravures showing architectural designs rendered in Acme brick. Illustrations show the various types of buildings erected in the Southwest in recent years. Sent free to architects applying on their office stationery.
- American Face Brick Association**, 1751 Peoples Life Bldg., Chicago, Ill.  
The Story of Brick. Third Edition. Booklet. 7 x 9¼ in. 55 pp. Illustrated. Presents the merits of face-brick from structural and artistic standpoints. Tables of comparative costs.
- The Home of Beauty. Fourth Edition. Book. 8 x 10 in. 72 pp. Color plates. Presents fifty designs for small face-brick houses submitted in national competition by architects. Text by Aymar Embury II, Architect. Price 50c.
- Bungalow and Small House Plans. Booklet. 8½ x 11 in. 50 pp. Illustrated. Four booklets, showing a variety of designs for small face-brick houses, covering 3, 4, 5, 6, 7 and 8 room houses. Price, 25c. each, \$1 for the set.
- A Manual of Face-Brick Construction. Booklet. 8½ x 11 in. Text-book on construction of the brick wall and various uses of face brick. 31 colored plates of brick houses with plans. Price, \$1.00.
- Architectural Details in Brickwork. Series 1, 2, 3. 8½ x 11 in. Very useful to the architect or draftsman. Sent free to architects applying on their office stationery. To others \$1.50.

## BUILDING FINANCE

- S. W. Straus & Co.**, 565 Fifth Ave., New York, N. Y.  
Forty-two Years without Loss to Any Investor. Booklet. 8 x 5 in. 38 pp. Illustrated. A carefully prepared booklet for the thinking investor. Describes Straus bonds, the property upon which loans are made, and explains the Straus plan of safeguards which made possible the 42-year record.

## BUILDING STONE—See Stone, Building

## BUILDING, STANDARD STEEL

- Truscon Steel Company**, 250 W. Lafayette Blvd., Detroit, Mich.  
Truscon Standard Building Catalog. 8½ x 11 in. 48 pp. Contains data and illustrations.

## BUILDING, STEEL PRODUCTS FOR

- Massillon Steel Joist Company**, The, Massillon, Ohio.  
Massillon Bar Joists. Pamphlet. 8½ x 11 in. 8 pp. Illustrated. Pamphlet containing general information descriptive of Massillon Bar Joist Fireproof Floor Construction, with cuts showing methods of construction and photographs of installations. Detailed Dimensions, Safe Loading Tables, Details of Construction. Catalog. 8½ x 11 in. 32 pp. Illustrated.
- Catalog contains complete detailed information about each Massillon Bar Joist Structural Unit.
- Truscon Steel Company**, 250 W. Lafayette Blvd., Detroit, Mich.  
Truscon Data Book. Catalog. 3½ x 6 in. 128 pp. Illustrated. Contains complete information with illustrations on Truscon reinforcing steel, steel windows, metal lath, standard buildings, concrete inserts, steel joists, pressed steel stamping and chemical products.

## CARPETS, IMPORTED

- Kent-Costikyan Trading Company, Inc.**, 484 Fifth Ave., New York, N. Y.  
Rugs. Catalog. 9½ x 6¼. 56 pp. Illustrated. Illustrates and describes an unusual collection of Oriental and Occidental rugs with stock list.

## CEMENT

- Carney Company**, The, Mankato, Minn. Booklet. 8 x 10 in. 24 pp. Illustrated. Complete information on product, showing prominent buildings in which this cement has been used.
- Booklet. 8½ x 11 in. 8 pp. Illustrated. Attractive circular describing late improvements in manufacturing Carney; cost comparisons, physical tests, specifications and testimonials. Contains four-page list of Carney-built buildings in all parts of the United States with architects' and contractors' names.
- Louisville Cement Co.**, 315 Guthrie St., Louisville, Ky.  
Brixment. Booklet. 7½ x 5 in. 16 pp. Illustrated. Brixment, what it is, what it does, how it does it and why.
- Sandusky Cement Co.**, Dept. F, Cleveland, Ohio.  
Medusa Waterproof White Portland Cement. Booklet. 8½ x 11 in. 32 pp. Illustrated.
- Medusa Integral Waterproofing Powder and Paste. Booklet. 8½ x 11 in. 88 pp. and cover.

## CONDUIT

- National Metal Molding Co.**, 1113 Fulton Building, Pittsburgh, Pa.  
Bulletin of all National Metal Molding Products. In correspondence folder. 9½ x 11½ in.
- Sheraduct. Circular. 5 x 8 in. Illustrated.
- Flexsteel. Circular. 5 x 8 in. Illustrated.

## CONSTRUCTION, FIREPROOF

- Massillon Steel Joist Co.**, Massillon, Ohio.  
Massillon Bar Joists. Brochure. 8½ x 11 in. Illustrated. Full data regarding the steel used for construction of floors in fireproof buildings of various kinds.
- National Fire Proofing Co.**, 250 Federal St., Pittsburgh, Pa.  
Standard Fire Proofing Bulletin 171. 8½ x 11 in. 32 pp. Illustrated. A treatise on fire proof floor construction.
- Northwestern Expanded Metal Co.**, 934 Old Colony Building, Chicago, Ill.  
Fireproof Construction Catalog. 6 x 9 in. 72 pp. Illustrated. Handbook of practical suggestions for architects and contractors. Describing Nemco Expanded Metal Lath.

## DAMP-PROOFING

- Philip Carey Co.**, Lockland, Cincinnati, Ohio.  
Architects' Specifications for Carey Built-Up Roofing. Booklet. 8 x 10¼ in. 24 pp. Illustrated. Complete data to aid in specifying the different types of built-up roofing to suit the kind of roof construction to be covered.
- Carey Built-Up Roofing for Modern School Buildings. Booklet. 8 x 10¼ in. 32 pp. Illustrated. A study of school buildings of a number of different kinds and the roofing materials adapted for each.
- Sonneborn Sons, Inc., L.**, 116 Fifth Ave., New York.  
Specification Sheet. 8½ x 11 in. Descriptions and specifications of compounds for dampproofing interior and exterior surfaces.

## DOORS AND TRIM, METAL

- The American Brass Company**, Waterbury, Conn.  
Illustrated pamphlet describing use and adaptability of Extruded Architectural Bronze Shapes for metal window frames, doors, grilles, counter screens, etc.
- The Compound & Pyrono Door Company**, St. Joseph, Mich.  
Pyrono Handbook for Architects and Contractors. 8½ x 11 in. 16 pp. Contains full information regarding Pyrono Fireproof Veneered Doors and Trim, with complete details and specifications.
- Pyrono details in sheet form for tracing.
- Dahlstrom Metallic Door Company**, 425 Buffalo St., Jamestown, N. Y.  
Architectural Catalog. 10 x 14 in. 46 pp. 11 sections. Illustrated. Catalog showing our regular styles and types of hollow metal doors and interior trim. Various types of frames and other architectural shapes also illustrated.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Fire Doors and Hardware. Booklet. 8½ x 11 in. 64 pp. Illustrated. Describes entire line of tin-clad and corrugated fire doors, complete with automatic closers, track hangers and all the latest equipment—all approved and labeled by Underwriters' Laboratories.

## DOORS—SERVICE

- Servidor Company**, The, 101 Park Ave., New York, N. Y.  
The Steel Servidor. Specifications, Data, Details and Description. Size 8½ x 11 in. 8 pp.
- Advantages of Servidor Service. Summarizes Servidor Service, outlines its merits and advantages and new revenue-producing power. Size 8½ x 11 in. 8 pp.
- Bulletin A-3—The Eternal Tip. Size 6½ x 9 in. 8 pp.
- Bulletin A-8—Servidores as an Investment. Size 6½ x 9 in. 8 pp.

## DRAFTING MATERIALS

- American Lead Pencil Company**, 220 Fifth Ave., New York, N. Y.  
VENUS Pencil in Mechanical Drafting. Booklet C20. 6 x 9 in. 16 pp. Illustrated. Describes the many possibilities of the VENUS for technical drawing.
- Catalog. 3¼ x 8¼ in. 25 pp. Illustrated. Describes pencils, holders, erasers, etc.



# SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 71

## DUMBWAITERS

**Kaestner & Hecht Co.,** Chicago, Ill.

Bulletin 520. Describes K. & H. Co. electric dumbwaiters. 8 pp.

**Sedgwick Machine Works,** 151 West 15th St., New York.

Catalog and Service Sheets. Standard specifications, plans and prices for various types, etc.  $4\frac{1}{4} \times 8\frac{3}{4}$  in. 60 pp. Illustrated.

## ELECTRICAL EQUIPMENT

**Connecticut Electric Mfg. Co.,** Bridgeport, Conn.

Up-to-date Electrical Specialties Pocket Catalog. 3 x  $4\frac{1}{4}$  in. 305 pp. Illustrated. Gives size, weight, prices and data for sockets, receptacles, rosettes, switches, cutouts and other wiring devices.

Connecticut Toggle Switches. Folder.  $3\frac{1}{4} \times 6\frac{1}{2}$  in. 4 pp. Illustrated. Describes latest idea in electric switch and gives list price, catalog numbers and schedules.

Connecticut Sockets. Folder.  $3\frac{1}{2} \times 6\frac{1}{2}$  in. 6 pp. Illustrated. Describes Key, Keyless and Push Button Sockets and gives prices and catalog numbers.

**Frank Adam Electric Company,** St. Louis, Missouri.

Catalog No. 32—1924 Panelboards—Steel Cabinets. 48 pp.  $7\frac{3}{4} \times 10\frac{1}{2}$  in. Illustrates and describes Safety Type Sectionally Constructed Panelboards, together with complete catalog listings.

**Frink, Inc., I. P.,** 24th St. and 10th Ave., New York, N. Y.

Catalog 415.  $8\frac{1}{2} \times 11$  in. 46 pp. Photographs and scaled cross-sections. Specialized bank lighting, screen and partition reflectors, double and single desk reflectors and Polaralite Signs.

**General Electric Company,** Schenectady, N. Y.

Wires and Cables. Booklet.  $8 \times 10\frac{1}{2}$  in. 85 pp. Illustrated. Four bulletins in a binder, describing wires and cables in general, conductor insulated with vulcanized rubber compound, varnished cambré and paper insulated cables, splicing materials and junction boxes for cable installations, armored cables.

Electric Fans. Folder. 6 pp.  $3\frac{1}{4} \times 6$  in. Illustrated. Describes 1922 line of electric fans, giving catalog numbers, voltages and frequencies.

Reliable Wiring Devices. Catalog. 3 x  $4\frac{1}{2}$  in. 206 pp. Illustrated. Pocket catalog giving prices, schedule classifications and data for socket receptacles, switches, rosettes, cutouts and fuses for miscellaneous devices.

Lighting of Public Buildings. Bulletin. 6 x 9 in. 25 pp. Illustrated. Describes lighting of galleries, banks, museums, libraries, municipal, county and state buildings.

**The Edwin F. Guth Co.,** 2615 Washington Ave., St. Louis, Mo.

Brascolite Catalog No. 10.  $10\frac{1}{2} \times 8$  in. 28 pp. Illustrated. Catalog listing Brascolite fixtures in wide variety of plain and decorative types. Contains information of value in planning a lighting installation.

Bank and Office Building Catalog.  $10\frac{1}{2} \times 8$  in. 16 pp. Illustrated. Catalog listing a selected line of fixture equipment for application to all outlets in bank or office buildings or similar buildings.

Architectural Bulletins, Series of 5.  $10\frac{1}{2} \times 8$  in. 28-64-44-28-44 pp. Illustrated. A series of five bulletins, each treating upon the application of lighting to one particular class of service. Hospitals; Banks and Office Buildings; Schools, Colleges and Y. M. C. A. Buildings; Church and Fraternal Buildings; Commercial Service.

Special Hospital Catalog.  $10\frac{1}{2} \times 8$  in. 9 pp. Illustrated. Illustrates a special selection of fixture equipment for hospital use including types suitable for all outlets.

**Hart & Hegeman Mfg. Co., The,** 342 Capital Ave., Hartford, Conn.

The Line of Least Resistance. Catalog R.  $10\frac{1}{2} \times 7\frac{1}{2}$  in. 152 pp. Illustrated. Complete display of switches, sockets, accessories and wiring devices with brief description.

A new H & H Switch. Leaflet.  $3\frac{1}{2} \times 6$  in. 4 pp. Illustrated. Illustrates a new H & H composition base push switch of De Luxe quality.

Tumbler Switches. Booklet.  $3\frac{1}{2} \times 6$  in. 6 pp. Illustrated. Shows complete line of H & H Tumbler Switches.

H & H Elextits. Booklet. 8 x  $10\frac{1}{4}$  in. Illustrated. Shows new complete line of Elextits—places for lights. May be used for Wall Receptacles or Electric Fixtures.

**The Holtzer-Cabot Electric Co.,** Amory St., Boston 19, Mass.

Signaling Systems for Hospitals. Brochure.  $8\frac{1}{2} \times 11$  in. 42 pp. Illustrated. Contains complete data covering Nurse's Call, Doctor's Call, "In" and "Out" Fire Alarm, Watchman's Clock and Telephone Systems.

Signaling Systems for Schools. Brochure.  $8\frac{1}{2} \times 11$  in. 47 pp. Illustrated. Contains complete data covering Telephone Systems, Program Bells, Fire-Alarm Systems, Low Tension Power Plant and Laboratory Equipment.

**Kohler Co.,** Kohler, Wis.

Kohler Automatic Power and Light 110 Volt D. C. Booklet. 5 x 7 in. 32 pp. Illustrated. Describes a standard voltage automatic, electric power and light plant for isolated homes.

**Pick & Company, Albert,** 208 West Randolph St., Chicago, Ill.

School Cafeterias. Booklet. 9 x 6 in. Illustrated. The design and equipment of school cafeterias with photographs of installation and plans for standardized outfits.

Kitchen Equipment. Booklet. 9 x 6 in. Illustrated. Photographs and descriptions of Hotel, Club and Hospital kitchens with treatise on plans and equipment of efficient kitchens.

Electric Kitchen Equipment. Booklet.  $8\frac{1}{2} \times 11\frac{1}{2}$  in. Illustrated. Photographs and descriptions of PIX "Master-Made" ranges, ovens, etc., for Hotels and Restaurants.

**Simplex Wire & Cable Co.,** 201 Devonshire St., Boston, Mass.

Simplex Manual Catalog and Reference Book.  $6\frac{1}{4} \times 4\frac{1}{4}$  in. 92 pp. Contains in addition to information regarding Simplex products, tables and data for the ready reference of architects, electrical engineers and contractors.

Specification No. 2053. For Simcore Wires and Cables. Various sizes of Conductor-Rubber Insulation.

## ELECTRICAL EQUIPMENT—Continued

**Western Electric Co.,** 195 Broadway, New York, N. Y.

Western Electric Inter-Phones for Apartment Houses. Booklet.  $5\frac{1}{4} \times 6\frac{1}{4}$  in. 16 pp. Illustrated. Illustrates and describes use of Inter-Phones in Apartment Houses.

Installing and Maintaining Western Electric Inter-Phones. In addition to giving general information on layout of system, details are supplied on individual Inter-Phone Systems, listing battery and wiring requirements.

**Westinghouse Electric & Mfg. Company,** East Pittsburgh, Pa.

Safety Switches. Folder F-4434 B.  $3\frac{1}{2} \times 6$  in. 2 pp. The 100 per cent Safe Service Entrance Switch.

Meter Service Switches. Booklet F-4484.  $3\frac{1}{2} \times 6$  in. 16 pp. Panel Boards. Catalog 22A.  $8\frac{1}{2} \times 11$  in. 16 pp. Illustrated.

What Fans Are For. Booklet F-4520.  $3\frac{1}{4} \times 6$  in. 16 pp. Illustrated in color.

## ELEVATORS

**Kaestner & Hecht Co.,** Chicago, Ill.

Bulletin 500. Contains 32 pp. giving general information on passenger elevators for high buildings.

Bulletin 530. Interlocks for Passenger and Freight Elevators.

Bulletin. Signals for Passenger and Freight Elevators.

**Otis Elevator Company,** 260 Eleventh Ave., New York, N. Y.

Otis Push Button Controlled Elevators. Descriptive leaflets.  $8\frac{1}{2} \times 11$  in. Illustrated. Full details of machines, motors and controllers for these types.

Otis Geared and Gearless Traction Elevators of All Types. Descriptive leaflets.  $8\frac{1}{2} \times 11$  in. Illustrated. Full details of machines, motors and controllers for these types.

Escalators. Booklet.  $8\frac{1}{2} \times 11$  in. 22 pp. Illustrated. Describes use of escalators in subways, department stores, theaters and industrial buildings. Also included elevators and dock elevators.

**Richards-Wilcox Mfg. Co.,** Aurora, Ill.

Elevators. Booklet.  $8\frac{1}{2} \times 11$  in. 24 pp. Illustrated. Describes complete line of "Ideal" elevator-door hardware and checking devices, also automatic safety devices.

**Sedgwick Machine Works,** 151 West 15th St., New York, N. Y.

Catalog and descriptive pamphlets.  $4\frac{1}{4} \times 8\frac{3}{4}$  in. 70 pp. Illustrated. Descriptive pamphlets on hand power freight elevators, sidewalk elevators, automobile elevators, etc.

## FENCES

**The Stewart Iron Works Company,** Cincinnati, Ohio.

Book of Designs "C." 9 x 12 in. 80 pp. Illustrated. Book of designs illustrated from photographs of ornamental iron fence and entrance gates erected by us. Valuable to architects.

## FIRE DOORS—See Doors, Windows and Trim, Metal

## FIREPLACE EQUIPMENT

**Covert Co., H. W.,** 137 E. 46th St., New York, N. Y.

Hints on Fireplace Construction. Catalog.  $5\frac{1}{2} \times 8\frac{1}{2}$  in. 11 pp. Illustrated. Diagrams of construction and installation of Covert "Improved" and "Old Style" Dampers and Smoke Chambers. Also illustrations of Covert brass and wrought iron Fireplace Fittings.

## FIREPROOFING—See also Construction, Fireproof

**The General Fireproofing Company,** Youngstown, Ohio.

Fireproofing Handbook. 64 pp.  $8\frac{1}{2} \times 11$  in. Illustrated. Gives methods of construction, specifications, data on Herringbone metal lath, steel tile, Trussit solid partitions, steel lumber, self-centering formless concrete construction.

## FLOOR HARDENERS (CHEMICAL)

**Sonneborn Sons, Inc., L.,** 116 Fifth Ave., New York, N. Y.

Lapidolith, the liquid chemical hardener. Complete sets of specifications for every building type in which concrete floors are used, with descriptions and results of tests.

## FLOORING

**Armstrong Cork & Insulation Co.,** 132 24th St., Pittsburgh, Pa.

Linoleum Floors for Public and Semi-Public Buildings.  $7\frac{1}{2} \times 10\frac{1}{2}$  in. 36 pp.

Linoleum Floors for Residences.  $7\frac{1}{2} \times 10\frac{1}{2}$  in. 32 pp.

Armstrong's Cork Tile. Revised Edition. Booklet. 24 pp. 5 x 7 in. Illustrated in color. Contains complete specifications.

**Armstrong Cork Co. (Linoleum Division),** Lancaster, Pa.

Armstrong's Linoleum Floors. Catalog.  $8\frac{1}{2} \times 11$  in. 54 pp. Color plates. A technical treatise on linoleum, including table of gauges and weights and specifications for installing linoleum floors.

Decorative Floors. Booklet.  $11\frac{1}{4} \times 15$  in. 16 pp. Color plates. Armstrong's Linoleum Pattern Book, 1924. Catalog.  $3\frac{1}{2} \times 6$  in. 208 pp. Color Plates. Reproductions in color of all patterns of linoleum and cork carpet in the Armstrong line.

Quality Sample Book. Two books.  $3\frac{1}{2} \times 5\frac{1}{4}$  in. Showing all gauges and thicknesses in the Armstrong line of linoleum and cork carpets.

Detailed Directions for Laying and Caring for Linoleum. Handbook. 5 x 7 in. 48 pp. Instructions for linoleum layers and others interested in learning most satisfactory methods of laying and taking care of linoleum.

Business Floors. Booklet. 6 x 9 in. 48 pp. Illustrated in color. Explains use of linoleum for offices, stores, etc., with reproductions in color of suitable patterns, also specifications and instructions for laying.

**Bonded Floors Company, Inc.,** 1421 Chestnut St., Philadelphia, Pa.

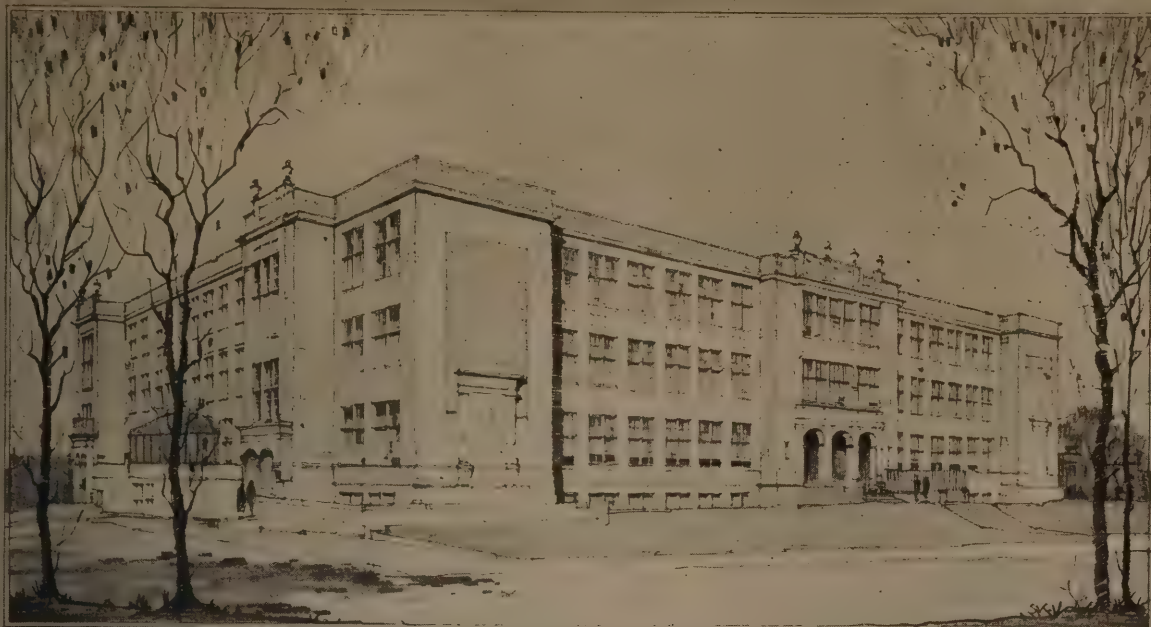
Gold-Seal Treadlite Tile. Booklet.  $7\frac{1}{2} \times 10\frac{1}{4}$  in. 32 pp. Illustrated. An illustrated booklet showing Treadlite Tile installations and containing general information, specifications, etc., with reproductions of the product in color.

Gold-Seal Rubber Tile Folder. Folder  $7\frac{1}{2} \times 10\frac{1}{4}$  in. 8 pp. Illustrated. A folder describing the usages and composition of Rubber Tile. Profusely illustrated with pictures of installations and reproductions of the product in color.

Hospital Floors. Description and advantages of using Gold-Seal Battleship Linoleum. Gold-Seal Treading Tile and Gold-Seal Rubber Tile in hospital construction insuring durable, noiseless, sanitary and attractive floors. Illustrated in color. 8 x  $10\frac{1}{4}$  in.

Distinctive Floors. A publication describing Gold-Seal Treadlite Tile, its composition, manufacture and method of installation. Illustrated in full color, 8 x  $10\frac{1}{4}$  in. 8 pp.





Westinghouse High School, Pittsburgh  
 Drawn by Samuel Chamberlin

Architects: Ingham and Boyd, Pittsburgh  
 Plumbing Contractors: Moss and Blakely Plumbing Co., Pittsburgh

## Anaconda Brass Pipe — protects the water supply

Anaconda Brass Pipe permanently protects the water supply of the Westinghouse High School, Pittsburgh, Pa. This rustless pipe, which will not clog or discolor the water, was installed at an additional expense of less than 5% of the total plumbing cost.

Anaconda Brass Pipe is permanently identified by the Trademark which is stamped in every length.

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 Ansonia, Conn., Torrington, Conn.  
 Waterbury, Conn., Buffalo, N. Y.  
 Kenosha, Wisconsin

In Canada: ANACONDA AMERICAN BRASS LIMITED, NEW TORONTO, ONTARIO



# SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 72

## FLOORING—Continued

- Carter Bloxonend Flooring Co.**, Long Bldg., Kansas City, Mo.  
 Bloxonend Flooring. Booklet.  $3\frac{1}{4} \times 6\frac{1}{4}$  in. 20 pp. Illustrated.  
 Describes uses and adaptability of Bloxonend Flooring to concrete, wood or steel construction, and advantages over loose wood blocks.  
 Specification Sheet. 4 pp.  $8\frac{1}{2} \times 11$  in. Illustrated. Standard Specifications in convenient form for Architects and Engineers.  
 Lateral Nailing Specification. Folder,  $8\frac{1}{2} \times 3\frac{3}{4}$  in. 4 pp. Illustrated. Shows how this method of nailing eliminates embedded sleepers, wood sub-floor or nailing strips.  
 What's in a Name? Folder.  $8\frac{1}{2} \times 11$  in. Illustrated. Enumerates advantages of a heavy service flooring that lays smooth and stays smooth.
- Galassi Company**, 153 East 38th St., New York, N. Y.  
 Suggesting a Standard Specification for Terrazzo Work. Booklet. Specifications for the use of terrazzo.
- Muller Co., Franklyn R.**, Waukegan, Ill.  
 Asbestone Composition Flooring. Circular.  $8\frac{1}{2} \times 11$  in. Descriptions and Specifications.
- Norton Company**, Worcester, Mass.  
 Filing Folder.  $8\frac{1}{2} \times 11\frac{1}{4}$  in. 27 pp. Illustrated with drawings. Specification data for architects.
- Ritter Lumber Company, W. M.**, 115 E. Rich St., Columbus, Ohio.  
 Ritter Oak Flooring. Booklet.  $5 \times 7$  in. 31 pp. Illustrated.  
 How to select the right kind of Oak Flooring. Grades of Flooring. How Oak Flooring should be laid, nailed and scraped. How to care for Oak Flooring.
- Ritter Appalachian Oak Flooring**. Booklet.  $8 \times 11$  in. 16 pp. Illustrated. Gives illustrated information how Flooring is manufactured and eight reasons why Appalachian Oak Flooring will assure architects the floor beauty and serviceability they are looking for in Oak Flooring.
- Rodd Company, The**, Century Bldg., Pittsburgh, Pa.  
 Redwood Block Floor. Booklet.  $4 \times 9$  in. Illustrated. Contains technical information on Rodd Floors of California Redwood Blocks. Also specifications.

## FURNACES—See Heating Equipment

## FURNITURE

- Allen, Louis L.**, 521 Madison Ave., New York, N. Y.  
 Booklet.  $5 \times 7\frac{1}{2}$  in. Illustrated. Issued quarterly, listing many antique pieces of furniture, old oak and pine paneling and garden figures; fountains, bird baths, sundials, etc.
- American Seating Co.**, 14 E. Jackson Blvd., Chicago, Ill.  
 Ars Ecclesiastica Booklet.  $8\frac{1}{2} \times 11$  in. 48 pp. Illustrations of church fittings in carved wood.  
 Theater Chairs. Booklet.  $6 \times 9$  in. 48 pp. Illustrations of theater chairs.
- Fain Manufacturing Company**, Norfolk, Virginia.  
 The Fain Fold Away Dining Room. Booklet. 4 pp.  $8\frac{1}{2} \times 11$  in. Illustrated. Information to architects and builders on new folding devices with architect's specifications and views of construction. Concise description of merits, use and price.
- Kensington Mfg. Company**, 41 West 45th St., New York, N. Y.  
 Photographs and full description of hand-made furniture in all the period styles furnished promptly in response to a specific inquiry.  
 Illustrated booklet indicative of the scope, character and decorative quality of Kensington furniture mailed on request.
- White Door Bed Company, The**, 130 North Wells Street, Chicago, Ill.  
 Booklet.  $8\frac{1}{2} \times 11$  in. 20 pp. Illustrated. Describes and illustrates the use of "White" Door Bed and other space-saving devices.

## GARDEN ACCESSORIES

- Davey Tree Expert Company, The**, 907 Elm St., Kent, Ohio.  
 When Your Trees Need The Tree Surgeon. Booklet. 16 pp.  $8 \times 9\frac{1}{4}$  in. Illustrated. Lists and explains a number of serious tree troubles of common occurrence; contrasts the scientific methods used by properly trained and conscientious men to remedy these troubles with the work of unscrupulous or untrained men.

## GLASS CONSTRUCTION

- Mississippi Wire Glass**, 220 Fifth Avenue, New York.  
 Mississippi Wire Glass. Catalog.  $3\frac{3}{8} \times 8\frac{1}{2}$  in. 32 pp. Illustrated. Covers the complete line.
- Plate Glass Mfrs. of America**. First National Bank Bldg., Pittsburgh, Pa.  
 Plate Glass. Booklet.  $5\frac{1}{4} \times 9\frac{1}{4}$  in. 12 pp. Describes manufacture and use of plate glass, with sizes.

## GRANITE—See Stone, Building

## HARDWARE

- Cutler Mail Chute Company**, Rochester, N. Y.  
 Cutler Mail Chute Model F. Booklet.  $4 \times 9\frac{1}{4}$  in. 8 pp. Illustrated.
- McCabe Hanger Manufacturing Company**, 425 West 25th St., New York, N. Y.  
 Special Folding and Accordion Door Hangers. Booklet.  $6 \times 9$  in. 8 pp. Illustrated. Booklet with complete description of various types of folding and accordion door hangers. Full size details upon request.
- McKinney Mfg. Co.**, Pittsburgh, Pa.  
 McKinney Complete Garage Hardware Sets. Catalog.  $6\frac{1}{4} \times 10$  in. 20 pp. Illustrated. Describes full line of complete garage hardware sets for all kinds of entrances, with views of typical entrances and sketches.
- McKinney Hinges and Butts**. General Catalog.  $6\frac{1}{4} \times 10$  in. Illustrates and describes complete line of McKinney wrought builders' hardware products, including hinges, butts, door hangers and track, latches, garage hardware and specialties.

## HARDWARE—Continued

- Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
 Distinctive Garage Door Hardware. Booklet.  $8\frac{1}{2} \times 11$  in. 65 pp. Illustrated. Complete information accompanied by data and illustrations on different kinds of garage door hardware.
- Sargent & Company**, New Haven, Conn.  
 Sargent Locks and Hardware. Architects' Edition.  $9 \times 12$  in. 762 pp. Illustrated. The latest complete catalog of Locks and Hardware.  
 Details to Which Standard Hardware Can Be Applied. Booklet. 6 pp.  $9 \times 12$  in. Illustrated. Treats with diagrams, portions of doors and windows to which hardware can be applied.
- Vonnegut Hardware Co.**, Indianapolis, Ind.  
 Von Duprin Self-Releasing Fire Exit Devices. Catalog. 12F.  $8 \times 11$  in. 41 pp. Illustrated.  
 Saving Lives. Booklet.  $3\frac{1}{4} \times 6$  in. 16 pp. Illustrated. A brief outline why Self-Releasing Fire Exit Devices should be used.

## HEATING EQUIPMENT

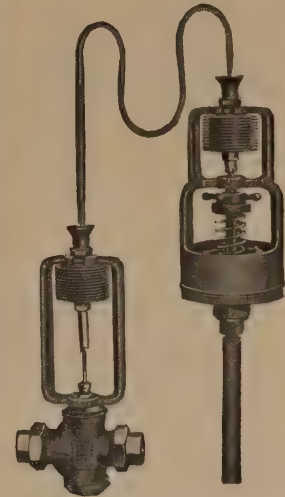
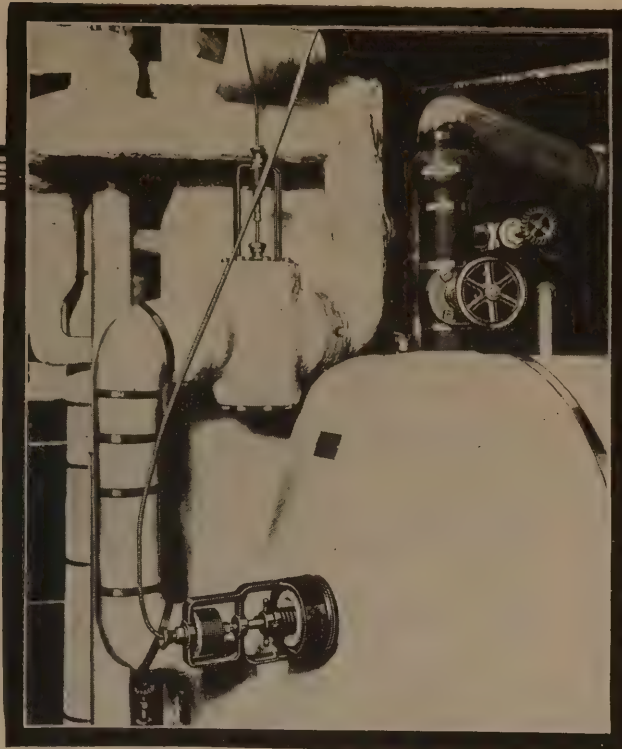
- Bryant Heater & Mfg. Co., The**, 962 East 72nd St., Cleveland, O.  
 Hand Book on Water Heating by Gas.  $8\frac{1}{2} \times 11$  in. 16 pp. Illustrated. Bryant Gas Boilers. Bulletin 309, for AIA File No. 29 D2. Contains valuable information on hot water, steam and vapor heating; data to determine quickly the size of heating plant for any building; also dimensions, weights, fittings furnished and other data of interest. Other descriptive literature available. Comprehensive handbook in preparation.  
 Hand Book on House Heating by Gas.  $8\frac{1}{2} \times 11$  in. 8 pp. Illustrated. Bryant Automatic Hot Water Storage Systems. Bulletin 308, for AIA File No. 30 C1. Contains complete information on water heating systems, weights, dimensions, etc. Other descriptive material available. Comprehensive handbook in preparation.
- James B. Clow & Sons**, 534 S. Franklin St., Chicago, Ill.  
 Gasteam. Catalog.  $6 \times 9$  in. 16 pp. Illustrated. New radiator using gas for fuel.
- Cox Stove Company, Abram**, American and Dauphin Sts., Philadelphia, Pa.  
 Make Wintry Days Happy Days. Folder.  $3\frac{1}{4} \times 6\frac{1}{4}$  in. 8 pp. Illustrated. Two folders. One describes in detail Novelty Marvel Warm Air Furnaces. The other shows the Pipeless Novelty Marvel.  
 Novelty Boilers 76A. Booklet.  $6\frac{1}{4} \times 3\frac{3}{4}$  in. 32 pp. Illustrated. Descriptive of entire line of boilers, including Novelty Round Boilers, Side-Feed Sectional Boilers 18-25-30-40 Series, and Carburetor Boilers, 30 and 40 Series; Novelty Water Heaters.
- Excelso Specialty Works**, 119 Clinton St., Buffalo, N. Y.  
 Excelso Water Heater. Booklet. 12 pp.  $3 \times 6$  in. Illustrated. Describing the new Excelso method of generating domestic hot water in connection with heating boilers. (Firepot Coil eliminated.)
- The Fulton Company**, Knoxville, Tenn.  
 Syphon Temperature Regulators. Bulletin T-103.  $8\frac{1}{2} \times 11$  in. 16 pp. Complete data on Syphon temperature regulators for air and liquids. Catalog 100, complete line Syphon Heating Specialties.  
 Damper Regulators. Air and Vent Valves. Catalog No. 100.  $3\frac{3}{4} \times 6\frac{1}{4}$  in. Syphon Damper Regulators for steam, hot water and vapor systems. Syphon Air and Vent Valves.
- Illinois Engineering Co.**, Racine Ave., at 21st St., Chicago, Ill.  
 Vapor Heat Bulletin 21.  $8\frac{1}{2} \times 11$  in. 32 pp. Illustrated. Contains new and original data on Vapor Heating. Rules for computing radiation, pipe sizes, radiator tapings. Steam table showing temperature of steam and vapor at various pressures, also description of Illinois Vapor Specialties.
- Johnson Service Company**, 149 Michigan St., Milwaukee, Wis.  
 Regulation of Temperature and Humidity. Booklet.  $11\frac{1}{4} \times 8\frac{1}{2}$  in. 64 pp. Illustrated. Describes Johnson system of pneumatic, automatic regulation of temperature and humidity, and illustrates thermostats, valves, air compressors, dampers and other parts.  
 Johnson Electric Thermostats, Valves and Controllers. Booklet.  $6\frac{1}{4} \times 3\frac{1}{2}$  in. 24 pp. Illustrated. Excellent plates showing electric thermostats and controllers.
- Kelsey Heating Company**, James St., Syracuse, N. Y.  
 Booklet No. 5.  $4 \times 9$  in. 32 pp. Illustrated. A dealers' booklet showing the Kelsey Warm Air Generator Method of warming and distributing air. Gives dimensions, heating capacities, weights, kind of coal recommended and shows the mechanical and gravity systems of heating homes, churches and schools.  
 Monroe Pipeless Booklet.  $4\frac{1}{2} \times 8$  in. 20 pp. Illustrated.  
 Monroe Tubular Heater. Booklet.  $4\frac{1}{2} \times 8$  in. 20 pp. Illustrated.  
 General Booklet giving capacities, dimensions, weights, etc.  
 Syracuse Pipeless Booklet.  $4\frac{1}{2} \times 8$  in. 12 pp. Illustrated. General Booklet giving sizes and capacities.
- Kewanee Boiler Co.**, Kewanee, Ill.  
 Kewanee on the Job. Catalog.  $8\frac{1}{2} \times 11$  in. 80 pp. Illustrated. Showing installations of Kewanee boilers, water heaters, radiators, etc.  
 Catalogue No. 78.  $6 \times 9$  in. Illustrated. Describes Kewanee Fire-box Boilers with specifications and setting plans.  
 Catalogue No. 79.  $6 \times 9$  in. Illustrated. Describes Kewanee power boilers and smokeless tubular boilers with specifications.
- Utica Heater Company**, Utica, N. Y.  
 Imperial Round and Square Boilers and Supplies. Catalog.  $3\frac{1}{2} \times 6\frac{1}{2}$  in. Gives complete data on small heaters.  
 Special Folders.  $8\frac{1}{2} \times 11$  in. "Warmth and Comfort," describing the scientifically correct NEW IDEA pipeless furnaces, "SUPERIOR Warm Air Pipe Furnaces," a standard line of heating equipment for over forty years. "SUPER-SMOKELESS Pipe and Pipeless Furnaces," a new and remarkably efficient warm air heater, burning cheap soft coal without smoke—utilizing the principle of the Bunsen Burner.





No. 932 Unassembled

No. 932 3-part Sylphon Temperature Regulator is just the Regulator for awkward installations on hot water supply tanks in Apartments, Hotels, Hospitals, Clubs, etc.



No. 932 Assembled

## Insuring hot-water regulation in this hotel presented quite a problem to the architect

IT was the old story of high value real estate necessitating the adjusting of large operating plant units into comparatively small space. The most economical arrangement left the steam line quite a distance from the hot water supply tank, and interferences lay in between.

*The specification writer wrote  
"Use 3-part Sylphon Regulator"*

This solved the problem (and no other regulator could do it) because as the illustration shows, the valve was easily tapped into the steam line, the thermostatic bulb inserted in a convenient place in the end of the tank, and the two connected by slipping the power transmission unit into the detachable T-slot connections.

The power transmission unit (tubing of which may be of any length) is filled with a non-freezing liquid. Movement is transmitted by pressure upon this liquid acting between two small Sylphon Bellows, and is perfectly frictionless—no pulleys—no wire cables.

*The seamless, everlasting Sylphon Bellows guarantees close regulation*

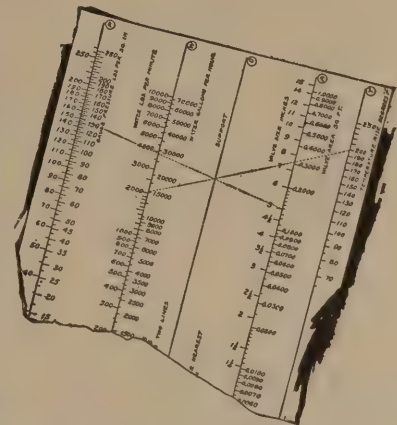
Since this No. 932, as all Sylphon Regulators, contains as its expansion member the famous Sylphon Bellows, it has strength, long life, and extreme sensitiveness, guaranteeing accurate, automatic control.

This Bellows, drawn from a flat sheet of metal, is without soldered seams, and because of this special construction and consequent flexibility, it not only gives close regulation, but also guarantees the widest possible throw to the valve and thus tends to prevent wire drawing or steam cutting of valve seats.

*Don't decide on size of Regulator by size of pipe line*

because too large a regulator not only costs more, but often cracks valve for small opening. We have prepared a Chart for Calculating Exact Sylphon Regulator Sizes. Let us send you one. It is **FREE**.

Ask for Chart FTR-103



Temperature Regulators

## THE FULTON COMPANY KNOXVILLE, TENN.

NEW YORK CHICAGO DETROIT BOSTON PHILADELPHIA Representatives in all principal cities in U. S.

European Representatives: Crosby Valve & Engineering Co., Ltd.  
41-42 Foley Street, London W. 1., England

Canadian Representatives: Darling Brothers, Ltd.  
120 Prince Street, Montreal, Canada



## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 74

### HEATING EQUIPMENT—Continued

Utica Imperial SUPER-SMOKELESS Boiler. Catalog.  $8\frac{1}{2} \times 11$  in. Consists of the following seven bulletins, either loose or bound together: (1) School Heating Bulletin. (2) Public Building Bulletin. (3) Theatre Heating Bulletin. (4) Churches and Religious Institutions. (5) Residences, Apartments and Hotels. (6) Offices, Industrial Buildings and Garages. (7) Technical Bulletin describing patented Bunsen Burner design and construction of the SUPER-SMOKELESS BOILER, which burns the cheapest grades of soft coal smokelessly and operates equally well with hard coal, coke or fuel oil.

### HEAT REGULATORS—See Heating Equipment

### HEATING AND VENTILATING

**Hoffman Specialty Company, Inc.**, 512 Fifth Ave., New York, N. Y.

Controlled Heat Booklet.  $5\frac{1}{2} \times 8\frac{1}{2}$  in. 28 pp.

The principles of vapor vacuum heat described in simple language for the consumer or layman.

Locking the Door Against the Heat Thief. Booklet.  $5\frac{1}{2} \times 8\frac{1}{2}$  in. 16 pp.

Describes No. 2 Hoffman Vacuum Valves and the principle of "Vacuum-izing" a single pipe steam heating system in consumer language.

**Thatcher Furnace Co.**, 39-41 St. Francis St., Newark, N. J.

Thatcher Heating and A Few Installations. 25 pp.  $6 \times 9$  in. Illustrated. Contains photo's of various types of buildings in which Thatcher Heaters are installed together with cuts and description of Thatcher Heaters.

History of Heat. 15 pp.  $8 \times 5$  in. Illustrated. Tracing the evolution of heat from its earliest stages.

**United States Radiator Corporation**, Detroit, Mich.

The Complete Line Catalog.  $6\frac{3}{4} \times 3\frac{3}{4}$  in. 270 pp. Illustrated. Giving complete information and engineering data on Capital and Winchester Boilers.

### HOISTS—See Ash Hoists

### HOLLOW TILE—See Tile, Hollow

### HOSPITAL EQUIPMENT

**Betz Company, Frank S.**, Hammond, Ind. 30 E. Randolph St., Chicago, Ill.

Hospital Book.  $7\frac{1}{4} \times 10\frac{1}{2}$  in. 212 pp. Illustrated profusely. Lists and describes with prices and illustrations a complete line of steel hospital furniture.

**The International Nickel Company**, 67 Wall St., New York, N. Y.

Hospital Applications of Monel Metal. Booklet.  $8\frac{1}{2} \times 11\frac{1}{2}$  in. 16 pp. Illustrated. Gives types of equipment in which Monel Metal is used, reasons for its adoption, with sources of such equipment.

**The Kny-Scheerer Corporation of America**, 119 Seventh Ave., New York.

Hospital Equipment, 16th Edition.  $7\frac{1}{4} \times 10\frac{1}{2}$  in. 232 pp. Illustrated. Complete description of Hospital and Surgical Furniture, Hospital Appliances including Operating Tables, Cabinets, Sterilizers for Water, Dressing and Instruments, also Hydrotherapeutic Apparatus.

Surgical Sundries. Second Edition. Booklet.  $7\frac{3}{4} \times 10\frac{1}{2}$  in. 48 pp. Illustrated. A complete line of glassware, enamelware, rubber goods, restraint apparatus, instrument sterilizers, sputum cups, wheel chairs and sick room comforts.

Electro-Medical. 25th Edition. Booklet.  $7\frac{1}{4} \times 10\frac{1}{2}$  in. 160 pp. Illustrated. A complete line of Albee Bone Sets, Apparatus for AC and DC, Cystoscopes, Heat Magnets, Vibrators, Compressors, Electric Light Baths, High Frequency Apparatus and X-Ray Apparatus and Accessories.

### INCINERATORS

**The Kerner Incinerator Company**, 1029 Chestnut St., Milwaukee, Wis.

The Kernerator. Booklet.  $5\frac{1}{2} \times 9\frac{1}{4}$  in. 40 pp. Illustrated. Describes principle and design of the Kernerator, guarantee and service, also gives illustrations of buildings where it has been installed, and testimonials.

Sanitary Elimination of Household Waste. Booklet.  $4 \times 9$  in. 16 pp. Illustrated. Shows process, installations and advantages of the Kernerator.

Sanitary Disposal of Waste in Hospitals. Booklet.  $4 \times 9$  in. 12 pp. Illustrated. Shows how this necessary part of hospital service can be taken care of by the Kernerator.

### INSULATION

**Bishopric Manufacturing Co.**, 103 Este Ave., Cincinnati, Ohio.

Specifications and Working Details. Booklet.  $7\frac{3}{4} \times 10\frac{1}{2}$  in. Illustrated. Contains plainly written instructions for the use of stucco, stucco base, plaster base and insulation base.

**Philip Carey Co., The**, Cincinnati, Ohio.

Carey Asbestos and Magnesia Products. Catalog.  $6 \times 9$  in. 72 pp. Illustrated.

**Johns-Manville, Inc.**, Madison Ave., and 41st St., New York, N. Y.

Johns-Manville Service to Power Users. Catalog.  $8\frac{1}{2} \times 11$  in. 150 pp. Illustrated. Contains valuable data on all forms of insulation, packages, steam traps, high temperature cements, brake locks and linings, also general technical data.

**United States Mineral Wool Co.**, 280 Madison Ave., New York.

The Uses of Mineral Wool in Architecture. Booklet.  $5\frac{1}{4} \times 6\frac{1}{2}$  in. 24 pp. Illustrated. Describes properties of mineral wool as insulation against heat, frost, sound. Specifications and section drawing for use as a fireproofing. Rule for estimate and cost.

### KITCHEN EQUIPMENT

**Betz Company, Frank S.**, Hammond, Ind. 30 E. Randolph St., Chicago, Ill.

Kitchunit. Booklet.  $7 \times 10\frac{1}{2}$  in. 4 pp. Illustrated. This illustrates and describes, including specifications, the Betzco All-Steel Kitchunits. A space-saving equipment that lowers building costs.

**Colt's Patent Fire Arms Mfg. Company**, Hartford, Conn.

AUTOSAN Dish and Silver Cleaning Machines. Booklets.  $6 \times 9$  in. Describing rotary table type and conveyor type machines.

### KITCHEN EQUIPMENT—Continued

**Wm. M. Crane Company**, 16-20 W. 32nd St., New York, N. Y.

VULCAN Gas Ranges and Appliances. Booklet.  $5 \times 8$  in. 50 pp. Illustrated. Describes complete line, including VULCAN SMOOTH TOP Compact Cabinet Gas Ranges for kitchens in the home.

VULCAN Gas Equipment for Hotels, Hospitals, Restaurants, etc. Booklet.  $5 \times 8$  in. 45 pp. Illustrated. Equipment for heavy-duty cooking requirements, with information of value to architects in planning kitchens.

**The International Nickel Company**, 67 Wall St., New York, N. Y.

Hotels, Restaurants and Cafeteria Applications of Monel Metal. Booklet.  $8\frac{1}{2} \times 11$  in. 32 pp. Illustrated. Gives types of equipment in which Monel Metal is used, with service data and sources of equipment.

**Pick & Company, Albert**, 208 W. Randolph St., Chicago, Ill.

School Cafeteria. Portfolio.  $17 \times 11$  in. 44 pp. Illustrated. An exhaustive study of the problems of school feeding, with copious illustrations and blue prints. Very valuable to the architect.

School Cafeterias. Booklet.  $9 \times 6$  in. Illustrated. The design and equipment of school cafeterias with photographs of installation and plans for standardized outfits.

Kitchen Equipment. Booklet.  $9 \times 6$  in. Illustrated. Photographs and descriptions of Hotel, Club and Hospital kitchens with treatise on plans and equipment of efficient kitchens.

Electric Kitchen Equipment. Booklet.  $8\frac{1}{2} \times 11\frac{1}{2}$  in. Illustrated. Photographs and descriptions of PIX "Master-Made" ranges, ovens, etc., for Hotels and Restaurants.

Hotel, Apartment Building, Club and Institution Installations. Portfolio.  $17 \times 11$  in. 100 pp. Shows, mostly by plates, how the Albert Pick Company equips hotels completely from top to bottom.

Equipment for Cafeterias, Lunch Rooms, Restaurants, and Dining Rooms. Portfolio.  $17 \times 11$  in. 86 pp. Illustrated. The last word in Cafeteria equipment to meet all requirements.

**Thatcher Furnace Co.**, 39-41 St. Francis St., Newark, N. J.

Range with Personality. 15 pp.  $8 \times 5$  in. Illustrated. Explains the famous Thatcher "Twin-Fire" combination coal and gas range.

Thatcher is the Heater for that Building. 8 pp.  $8 \times 9$  in. Illustrated. Contains cuts, dimensions, and descriptions of Thatcher Heaters for architects' use.

### LABORATORY EQUIPMENT

**Kewaunee Manufacturing Company**, 141 Lincoln St., Kewaunee, Wis.

Kewaunee Book of Laboratory Furniture. Catalog.  $7 \times 10$  in. 408 pp. Illustrated. Science and Vocational Laboratory Furniture for schools, colleges, technical institutes, hospitals, etc., including floor plans, illustrations of buildings and equipped laboratories, illustrations of equipment engineering data for mechanical ventilation and illustrations of special plumbing fixtures for laboratory use.

### LANTERNS

**Todhunter, Arthur**, 414 Madison Ave., New York.

Hand Wrought Lanterns. Booklet.  $5\frac{1}{4} \times 6\frac{1}{4}$  in. 20 pp. Illustrated in Black and White. With price list. Lanterns appropriate for exterior and interior use, designed from old models and meeting the requirements of modern lighting.

### LATH, METAL AND REINFORCING

**The General Fireproofing Company**, Youngstown, Ohio.

Herringbone Metal Lath Handbook.  $8\frac{1}{2} \times 11$  in. 32 pp. Illustrated. Standard specifications for Cement Stucco on Herringbone Rigid Metal Lath and interior plastering.

**National Steel Fabric Company**, Pittsburgh, Pa.

Folder.  $8\frac{1}{2} \times 11$  in. 6 pp. Illustrated. Describes National Stucco-Plaster Reinforcement, a base for exterior stucco and interior plastering, composition flooring, etc., with photographs and drawings.

**Northwestern Expanded Metal Co.**, 934 Old Colony Building, Chicago, Ill.

Fireproof Construction Catalog.  $6 \times 9$  in. 72 pp. Illustrated. Hand book of practical suggestions for architects and contractors, Describing Nemco Expanded Metal Lath.

### LAUNDRY CHUTES

**The Pfaudler Company**, 217 Cutler Building, Rochester, N. Y.

Pfaudler Glass-Lined Steel Laundry Chutes. Booklet.  $5\frac{1}{2} \times 7\frac{3}{4}$  in. 16 pp. Illustrated. A beautifully printed brochure describing in detail with architects' specifications THE PFAUDLER GLASS LINED STEEL LAUNDRY CHUTES. Contains views of installations and list of representative examples.

### MAIL CHUTES

**Cutler Mail Chute Company**, Rochester, N. Y.

Cutler Mail Chute Model F. Booklet.  $4 \times 9\frac{1}{4}$  in. 8 pp. Illustrated.

### MANTELS

**Arthur Todhunter**, 414 Madison Ave., New York, N. Y.

Mantels and Fireplace Equipment. Booklet.  $8\frac{1}{2} \times 11$  in. Illustrated. Separate sheet plates showing mantels installed and furnished, also andirons and grates grouped with suitable pieces, also lanterns, weather-vanes and hand-wrought hardware. All sizes and descriptions given on each plate.

### MARBLE

**The Georgia Marble Company**, Tate, Ga. New York Office, 1328 Broadway.

Why Georgia Marble is Better. Booklet.  $3\frac{3}{4} \times 6$  in. Gives analysis, physical qualities, comparison of absorption with granite, opinions of authorities, etc.

Convincing Proof. Booklet.  $3\frac{3}{4} \times 6$  in. 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of Architects and Sculptors.

**Tompkins-Kiel Marble Company**, 505 Fifth Ave., New York, N. Y.

Reproductions in natural colors of imported and domestic marbles and stone for interior and exterior uses.

Bulletins.  $9\frac{1}{4} \times 12\frac{3}{4}$  in. illustrating buildings of various types in which Tompkins-Kiel Marble Company's imported and domestic marbles and stone have been used.





*This entire building of R. H. Fyfe & Company, Detroit, Mich., houses one of the largest exclusively retail shoe stores under one roof in the United States. It is equipped with a Western Electric Inter-Phone System, which contributes materially to the service rendered by R. H. Fyfe & Co.*

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Fyfe Building—*

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INTER-PHONE  
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**Western Electric**

OFFICES IN FORTY-NINE PRINCIPAL CITIES



# SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 76

## METAL LATH—See Lath, Metal and Reinforcing

### METALS

- American Sheet & Tin Plate Co.**, Frick Building, Pittsburgh, Pa. Reference Book. Pocket Ed.  $2\frac{1}{2} \times 4\frac{1}{2}$  in. 168 pp. Illustrated. Covers the complete line of Sheet and Tin Mill Products. Apollo and Apollo-Keystone Galvanized Sheets. Catalog.  $8\frac{1}{2} \times 11$  in. 20 pp. Illustrated.
- Research on the Corrosion Resistance of Copper Steel. Booklet.  $8\frac{1}{2} \times 11$  in. 24 pp. Illustrated. Technical information on results of atmospheric corrosion tests of various sheets under actual weather conditions.
- Chase Metal Works**, Waterbury, Conn. How to Order Brass. Booklet.  $8\frac{1}{2} \times 5\frac{1}{2}$  in. Illustrated. Tells just how to order brass—about alloys, tempers, tolerances most suitable for various uses. Warns against the usual mistakes and troubles in ordering. Contains complete tables of alloys, tempers, tolerances, uses, etc.
- Chase Diamond Booklet.  $11\frac{1}{4} \times 9$  in. 8-16 pp. Illustrated. Periodical house organ issued once a month or so. Contains articles, pictures, news items of interest to customers, employees and brass industry in general. Ask to be put on the mailing list.
- The International Nickel Company**, 67 Wall St., New York, N. Y. The Choice of a Metal. Booklet.  $6\frac{1}{4} \times 3\frac{3}{4}$  in. 16 pp. Illustrated. Monel Metal—its qualities, use and commercial forms, briefly described.

## METAL TRIM—See Doors and Trim, Metal

### MILLWORK—See also Wood

- Curtis Companies Service Bureau**, Clinton, Iowa. Architectural Interior and Exterior Woodwork. Standardized. Book.  $9 \times 11\frac{1}{2}$  in. 240 pp. Illustrated. This is an Architects' Edition of the complete catalog of Curtis Woodwork, as designed by Trowbridge & Ackerman. Contains many color plates.
- Better Built Homes, Vols. XV-XVIII incl. Booklet.  $9 \times 12$  in. 40 pp. Illustrated. Designs for houses of five to eight rooms, respectively, in several authentic types, by Trowbridge & Ackerman, architects for the Curtis Companies.
- Curtis Details. Booklet.  $19\frac{1}{2} \times 23\frac{1}{2}$  in. 20 pp. Illustrated. Complete details of all items of Curtis woodwork, for the use of architects.
- Roddis Lumber & Veneer Company**, Marshfield, Wis. Roddis Doorman. Booklet.  $10\frac{1}{4} \times 7\frac{1}{4}$  in. 12 pp. Illustrated. Describes and illustrates the use of Roddis Doors for residences, clubs, hotels, etc.
- Hartmann-Sanders Company**, 2155 Elston Ave., Chicago, Ill. Column Catalog.  $7\frac{1}{2} \times 10$  in. 48 pp. Illustrated. Contains prices on columns 6 to 36 in. Diameter various designs and illustrations of Columns and installations.
- The Pergola Catalog.  $7\frac{1}{2} \times 10$  in. 64 pp. Illustrated. Contains illustrations of Pergola lattices. Garden Furniture in Wood and Cement. Garden accessories.

### MORTAR COLORS

- Clinton Metallic Paint Co.**, Clinton, N. Y. Clinton Mortar Colors. Folder.  $8\frac{1}{2} \times 11$  in. 4 pp. Illustrated in color, gives full information concerning Clinton Mortar Colors with specific instructions for using them.
- Color Card.  $6\frac{1}{2} \times 3\frac{3}{4}$  in. Illustrates in color the ten shades in which Clinton Mortar Colors are manufactured.

### OFFICE SUPPLIES

- Chas. M. Higgins & Co.**, 271 Ninth St., Brooklyn, N. Y. Descriptive Catalog.  $3\frac{1}{2} \times 5\frac{1}{2}$  in. 27 pp. Illustrated. Contains description and prices of Higgins Inks and Adhesives. Color Card illustrating various colors of the drawing inks supplied separate, size  $3\frac{1}{2} \times 6\frac{1}{4}$ .

### PAINTS, STAINS, VARNISHES AND WOOD FINISHES

- Cabot, Inc.**, Samuel, Boston, Mass. Cabot's Creosote Stains. Booklet.  $4 \times 8\frac{1}{2}$  in. 16 pp. Illustrated.
- Eagle-Picher Lead Company**, The, 208 S. La Salle St., Chicago, Ill. Specifications for Painting Structural Steel and Iron. Booklet.  $9\frac{1}{2} \times 11\frac{1}{2}$  in. 7 pp. Not Illustrated. A set of specifications which embody the latest development in this field as revealed by the research department of The Eagle-Picher Lead Company in the light of their eighty-one years' experience, enclosed in folder  $13 \times 2$  in., ready for filing.
- Fighting Rust with Sublimed Blue Lead. Book. 80 pp. Illustrated.  $5\frac{1}{2} \times 8\frac{1}{2}$  in. An excellent addition to one's technical library, well bound in a stiff cover. An assemblage of scientific facts concerning the theory of corrosion of iron and steel and the prevention of rust with Sublimed Blue Lead.
- Chemical Analysis of Lead and Its Compounds. Book.  $5\frac{1}{2} \times 8\frac{1}{2}$  in. 160 pp. Illustrated. A treatise on the latest methods of analysis adopted by the leading laboratories which must examine lead and its compounds from an analytical standpoint.
- Lead Tree Chart.  $9 \times 11\frac{1}{2}$  in. 1 p. Framed Chart. Not illustrated. A chart reflecting all the uses of lead, from crude ore to the finished products.
- Zinc Tree Chart.  $9 \times 11\frac{1}{2}$  in. 1 p. Framed Chart. Not illustrated. A chart reflecting all the uses of zinc—from the ore to the finished product.
- Rust-proofing Pamphlet.  $3 \times 5$  in. 16 pp. Illustrated. Of interest to anyone connected in any way with steel construction.
- The Glidden Company**, Cleveland, Ohio. More Daylight.  $8 \times 10\frac{1}{2}$  in. 20 pp. Portraying by illustrations and text the need and methods of modern mill painting.
- The Hockaday Company**, 1823 Carroll Ave., Chicago, Ill. Paint Mileage. Book.  $8 \times 10\frac{1}{2}$  in. 56 pp. Illustrated. A reference book on interior painting. Describes use of paint over all sorts of surfaces, with illustrations of buildings where Hockaday has been specified. Hockaday service explained.
- Solving Your Paint Problems. Booklet.  $8\frac{1}{2} \times 11$  in. 44 pp. Illustrated. Describes use of Hockaday Paint in Industrial Buildings, particularly in textile mills. Details of Hockaday service and specifications.

## PAINTS, STAINS, VARNISHES & WOOD FINISHES—Continued

- Martin Varnish Co.**, 2500 Quarry St., Chicago, Ill. Architectural Specifications. Booklet.  $8\frac{1}{2} \times 11$  in. 20 pp. Illustrated. Complete guide for Architects in specifying Martin Varnish Products.
- Your Floors. Booklet.  $5 \times 7$  in. 20 pp. Illustrated. Explains fully how to finish all kinds of floors and woodwork with Martin's Pure Varnish.
- National Lead Company**, 111 Broadway, New York, N. Y. Handy Book on Painting. Book.  $5\frac{1}{2} \times 3\frac{3}{4}$  in. 100 pp. Gives directions and formulas for painting various surfaces of wood, plaster, metals, etc., both interior and exterior.
- Red Lead in Paste Form. Booklet.  $6\frac{1}{4} \times 3\frac{1}{2}$  in. 16 pp. Illustrated. Directions and formulas for painting metals.
- Came Lead. Booklet.  $8\frac{1}{4} \times 6$  in. 12 pp. Illustrated. Describes various styles of lead comes.
- Cinch Anchoring Specialties. Booklet.  $6 \times 3\frac{1}{2}$  in. 20 pp. Illustrated. Describes complete line of expansion bolts.
- New Jersey Zinc Company**, 160 Front St., New York, N. Y. Zinc as a Paint Pigment. Technical treatise on the subject, with illustrations and reports of tests. 24 pp.  $6 \times 9$  in.
- Mapaz No. 1 Painting Handbook. Pocket size combination handbook and notebook containing valuable information on Zinc Oxide and its use in paint. Other data of interest to architects, including lace stencils, color formulas, etc.
- The Ripolin Company**, Cleveland, Ohio. Ripolin Specifications. Book.  $8 \times 10\frac{1}{4}$  in. 12 pp. Complete specifications and general instructions for the application of Ripolin, the original Holland enamel paint. Also directions for proper finishing of wood, metal, plaster, concrete, brick and other surfaces.
- Why Ripolin Has an International Reputation.  $8 \times 10\frac{1}{4}$  in. 24 pp. Designed for the architect's files to illustrate the many varied uses of Ripolin Enamel Paint in all parts of the world. Profusely illustrated.
- Ruberoid Co.**, The (formerly the Standard Paint Co.), 95 Madison Avenue, New York, N. Y. Preservative Coating. Booklet.  $6 \times 9$  in. 15 pp. Illustrated. Presents in a concise manner the properties and uses of the Ruberoid Company's various paint preparations.
- Sherwin-Williams Company**, 601 Canal Rd., Cleveland, Ohio. Painting Concrete and Stucco Surfaces. Bulletin No. 1.  $8\frac{1}{2} \times 11$  in. 8 pp. Illustrated. A complete treatise with complete specifications on the subject of Painting of Concrete and Stucco Surfaces. Color chips of paint shown in bulletin.
- Enamel Finish for Interior and Exterior Surfaces. Bulletin No. 2.  $8\frac{1}{2} \times 11$  in. 12 pp. Illustrated. Thorough discussion including complete specifications for securing the most satisfactory enamel finish on interior and exterior walls and trim.
- Painting and Decorating of Interior Walls. Bulletin No. 3.  $8\frac{1}{2} \times 11$  in. 20 pp. Illustrated. A wonderful reference book on Flat Wall Finish including texture effects which are taking the country by storm. Every architect should have one on file.
- Protective Paints for Metal Surfaces. Bulletin No. 4.  $8\frac{1}{2} \times 11$  in. 12 pp. Illustrated. A highly technical subject treated in a simple, understandable manner.
- Sonneborn Sons, Inc., L.**, Dept. 4, 116 Fifth Avenue, New York. Paint Specifications. Booklet.  $8\frac{1}{2} \times 10\frac{1}{4}$  in. 4 pp.

## PANELING—See Millwork

### PARTITIONS

- Circle "A" Products Corporation**, Champaign, Ill. Catalog.  $11\frac{1}{2} \times 8\frac{1}{2}$  in. 28 pp. Illustrated. Gives information data and illustration of Circle "A" Sectional Office Partitions.
- Erection Instructions for Ceiling Height Partitions, Sectional and Removable. Folder.  $8\frac{1}{2} \times 11$  in. Illustrated with drawings.
- Erection Instructions for Seven-Foot Partitions Sectional and Removable. Folder.  $8\frac{1}{2} \times 11$  in. Illustrated with drawings.
- Improved Office Partition Company**, 25 Grand St., Elmhurst, L. I. Telesco Partition. Catalog.  $8\frac{1}{2} \times 11$  in. 14 pp. Illustrated. Shows typical offices laid out with Telesco partitions, cuts of finished partition units in various woods. Gives specifications and cuts of buildings using Telesco.
- Detailed Instructions for erecting Telesco Partitions. Booklet. 24 pp.  $8\frac{1}{2} \times 11$  in. Illustrated. Complete instructions, with cuts and drawings, showing how easily Telesco Partition can be erected.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill. Partitions. Booklet.  $7 \times 10$  in. 32 pp. Illustrated. Describes complete line of track and hangers for all styles of sliding, parallel accordion and flush door partitions.
- Wilson Corporation**, J. G., 11 East 36th Street, New York, N. Y. Sectionfold and Rolling Partitions and Hygienic School Wardrobes. Catalog No. 37. Booklet  $8\frac{1}{2} \times 11$  in. 40 pp. Illustrated. Describes the uses of rolling and sectional partitions, particularly in schools and churches. Also the installation of Wilson school wardrobes.

### PIPE

- American Brass Company**, Waterbury, Conn. Bulletin B-1. Brass Pipe for Water Service.  $8\frac{1}{2} \times 11$  in. 28 pp. Illustrated. Gives schedule of weights and sizes (I.P.S.) of seamless brass and copper pipe, shows typical installations of brass pipe, and gives general discussion of the corrosive effect of water on iron, steel and brass pipe.
- A. M. Byers Company**, 235 Water St., Pittsburgh, Pa. Bulletin 26-A. What Is Wrought Iron?  $8 \times 10\frac{1}{4}$  in. 40 pp. Illustrated. Descriptions of materials and processes employed in manufacturing Byers genuine wrought iron pipe. Factors influencing corrosion. Gives table of pipe sizes, weights, dimensions, tests, etc., and tabulated records of the life of iron and steel pipe in various kinds of service.
- Bulletin 30. An Investigation of Pipe Corrosion in Hot Water Service.  $8 \times 10\frac{1}{4}$  in. 20 pp. Illustrated. Shows service records of iron, steel and brass pipe used for hot and cold water supply lines in 129 Pittsburgh Apartment Buildings.
- Bulletin 32. Corrosion of Wrought Iron, Cast Iron and Steel Pipe in House Drainage Systems.  $8 \times 10\frac{1}{4}$  in. 32 pp. Illustrated. Data obtained through investigations conducted in New York and Chicago by Dr. Wm. P. Gerhardt, C. E. and Thomas J. Claffy, Asst. Chief San. Inspector, City of Chicago.





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# SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 78

## PIPE—Continued

- Bulletin 38. The Installation Cost of Pipe. 32 pp. 8 x 10 1/4 in. Illustrated. Cost analysis of 20 different pipe installations, in power and industrial plants, office buildings, hotels, residences, etc.
- Chase Metal Works, Waterbury, Conn.**  
Why Brass Pipe. Booklet. 6 1/4 x 3 3/4 in. 6 pp. Small pamphlet showing advantages of brass pipe in concise form, together with table of standard sizes and weights.
- Clow & Sons, James B., 534 S. Franklin St., Chicago, Ill.**  
Catalog "A," 4 x 6 1/2 in. 700 pp. Illustrated. Shows a full line of steam, gas and water works supplies.
- National Tube Co., Frick Building, Pittsburgh, Pa.**  
"National" Bulletin No. 2. Corrosion of Hot Water Pipe. (8 1/2 x 11 in. 24 pp.) Illustrated. In this bulletin is summed up the most important research dealing with hot water systems. The text matter consists of seven investigations by authorities on this subject.  
"National" Bulletin No. 3. The Protection of Pipe Against Internal Corrosion (8 1/2 x 11 in. 20 pp.) Illustrated. Discusses various causes of corrosion, and details are given of the deactivating and deaerating systems for eliminating or retarding corrosion in hot water supply lines.  
"National" Bulletin No. 25. "National" Pipe in Large Buildings. 8 1/2 x 11 in. 88 pp. This bulletin contains 254 illustrations of prominent buildings of all types, containing "National" Pipe and considerable engineering data of value to architects, engineers, etc.  
Modern Welded Pipe. Book of 88 pages (8 1/2 x 11 in.), profusely illustrated with halftone and line engravings of the important operations in the manufacture of pipe.
- Reading Iron Company, Reading, Pa.**  
Reading Genuine Wrought Iron Pipe in the Making and in Service. Bulletin No. 1. 8 1/2 x 11 in. 32 pp. Illustrated. History of the Reading Iron Company. Origin of wrought iron—description of each process of manufacture of both butt-weld and lap-weld pipe—Reading Pipe in various fields.  
Book of Standards. Booklet. 5 x 7 in. 48 pp. Illustrated. Complete tables showing dimensions, tests and list prices on each of the 552 different kinds of Reading Tubular goods. Two simple tests for distinguishing genuine wrought iron pipe.  
The Painted Molecule. Booklet. 4 x 9 in. 8 pp. Illustrated. A brief, non-technical description of the reasons for the longer life of Reading Iron Pipe, with instances of actual service.  
The Ultimate Cost. Booklet. 5 1/4 x 7 1/4 in. 24 pp. Illustrated in two colors. A comparison in actual figures of the initial cost and the ultimate cost of plumbing and heating systems in several kinds of homes.
- Grinnell Company, 285 West Exchange Street, Providence, R. I.**  
Grinnell Bulletin Booklet. 10 1/2 x 7 1/4 in. Illustrated. Issued monthly. Describes and illustrates the different Grinnell products.

## PLUMBING EQUIPMENT

- American Brass Company, Waterbury, Conn.**  
Benedict Nickel. Illustrated pamphlet descriptive of Benedict Nickel White Metal for high-grade plumbing fixtures.
- Bronswiller-Balke-Collenster Co., 673 S. Wabash Ave., Chicago, Ill.**  
Whale-bone-ite Seat. Booklet. 3 1/2 x 6 1/4 in. 4 pp. Illustrated.
- Clow & Sons, James B., 534 S. Franklin Street, Chicago, Ill.**  
Catalog "M," 9 1/2 x 12 in. 184 pp. Illustrated. Shows complete line of plumbing fixtures for Schools, Railroads and Industrial Plants.
- Crane Company, 836 S. Michigan Avenue, Chicago, Ill.**  
Crane Products in World Wide Use. Catalog. 5 x 9 1/2 in. 24 pp. Illustrated.  
Plumbing Suggestions for Home Builders. Catalog. 3 x 6 in. 80 pp. Illustrated.  
Plumbing Suggestions for Industrial Plants. Catalog. 4 x 6 1/2 in. 43 pp. Illustrated.
- Douglas Co., The John, Cincinnati, Ohio.**  
Catalog "C," 10 1/2 x 8 in. 200 pp. Illustrated. Illustrates and describes the Douglas complete line of China Sanitary plumbing fixture.  
Booklet Douglas Suggests for your Home. 6 x 3 1/2 in. 39 pp. Illustrated.
- Eljer Company, Ford City, Pa.**  
Complete catalog. 3 3/4 x 6 1/4 in. 104 pp. Illustrated. Describes fully the complete Eljer line of standardized plumbing equipment, with diagrams, weights, measurements and copious illustrations.  
Standardized Sixteen. Circular. 3 3/4 x 6 1/4 in. 18 pp. Illustrated.
- Kohler Co., Kohler, Wis.**  
Catalog F. 7 1/2 x 10 1/2 in. 216 pp. Illustrates and describes the complete line of Kohler trade-marked plumbing ware.  
Roughing-In Measurement Binder. 5 x 8 in., containing loose leaf sheets on all staple fixtures.
- Maddock's Sons Company, Thomas, Trenton, N. J.**  
Catalog K. 10 1/2 x 7 1/2 in. 242 pp. Illustrated. Complete data on vitreous china plumbing fixtures with brief history of Sanitary Pottery.
- Speakman Company, Wilmington, Del.**  
Speakman Showers and Fixtures. Catalog. 4 1/2 x 7 1/2 in. 250 pp. Illustrated. Catalog of Modern Showers and Brass Plumbing Fixtures, with drawings showing layouts, measurements, etc.  
Toned Up in Ten Minutes. Booklet. 7 1/2 x 10 1/2 in. 16 pp. Illustrated. Modern Showers and Washups for Industrial Plants, showing the sanitary method of washing in running water.

## PUMPS

- Goulds Mfg. Co., The, Seneca Falls, N. Y.**  
Set of Twenty Bulletins. 7 1/2 x 10 1/4 in. 12 to 32 pp. each. Illustrated. Covers complete line of power and centrifugal pumps for all services.
- Kewanee Private Utilities Co., 442 Franklin St., Kewanee, Ill.**  
Bulletin E. 7 1/4 x 10 1/4 in. 32 pp. Illustrated. Catalog. Complete descriptions, with all necessary data, on Standard Service Pumps, Indian Brand Pneumatic Tanks, and Complete Water Systems, as installed by Kewanee Private Utilities Co.

## RAMPS

- Ramp Buildings Corporation, 115 Broad St., New York, N. Y.**  
The d'Humy Motoramp System of Building Design. Booklet. 8 1/2 x 11 in. 20 pp. Illustrated. Describes the d'Humy system of ramp construction for garages, service buildings, factories, warehouses, etc., where it is desirable to drive motor vehicles or industrial tractors under their own power from floor to floor.  
Storage Efficiency of Multi-Floor Garages. Leaflet. 8 1/2 x 11 in. 4 pp. Illustrated. A brief discussion of comparative storage efficiencies of elevator garages, ordinary ramp garages, and d'Humy Motoramp garages.  
Visibility. Pamphlet. 8 1/2 x 11 in. 2 pp. Illustrated. Discussion of visibility feature of d'Humy Motoramp System with reference to illustration of one particular installation.  
Series of Informal Bulletins on Garage Design. Sent upon request.

## REINFORCED CONCRETE—See also Construction, Concrete

- The General Fireproofing Company, Youngstown, Ohio.**  
Self-Sentering Handbook. 8 1/2 x 11 in. 36 pp. Illustrated. Methods and specifications on reinforced concrete floors, roofs and floors with a combined form and reinforced material.
- Truscon Steel Company, 250 W. Lafayette Blvd., Detroit, Mich.**  
Shearing Stresses in Reinforced Concrete Beams. Booklet. 8 1/2 x 11 in. 12 pp.
- North Western Expanded Metal Company, Chicago, Ill.**  
Designing Data. Book. 6 x 9 in. 96 pp. Illustrated. Covers the use of Econo Expanded Metal for various types of reinforced concrete construction.

## ROOFING

- American Brass Company, Waterbury, Conn.**  
Service Sheets 43-1 and 43-2, standard specifications and methods of laying copper roofings, flashings, hips, valleys, decks, gutters and leaders.
- American Sheet & Tin Plate Co., Frick Bldg., Pittsburgh, Pa.**  
Better Buildings. Catalog. 8 1/2 x 11 in. 32 pp. Describes Corrugated and Formed Sheet Steel Roofing and Siding Products, black, painted and galvanized, with directions for application of various patterns of Sheet Steel Roofing in various types of construction.  
Copper—Its Effect Upon Steel for Roofing Tin. Catalog. 8 1/2 x 11 in. 28 pp. Illustrated. Describes the merits of high-grade roofing tin plates and the advantages of the copper-steel alloy.  
The Testimony of a Decade. Booklet. 8 1/2 x 11 in. 16 pp., with Graphic Chart and illustration showing losses to various Iron and Steel Sheets for roofing, from atmospheric corrosion.
- Philip Carey Co., Lockland, Cincinnati, Ohio.**  
Architects' Specifications for Carey Built-up Roofing. Booklet. 8 x 10 1/4 in. 24 pp. Illustrated. Complete data to aid in specifying the different types of built-up roofing to suit the kind of roof construction to be covered.  
Carey Built-up Roofing for Modern School Buildings. Booklet. 8 x 10 1/4 in. 32 pp. Illustrated. A study of school buildings of a number of different kinds and the roofing materials adapted for each.
- Federal Cement Tile Co., 110 So. Dearborn St., Chicago, Ill.**  
The Indestructible Roof. Booklet. 10 x 13 in. 32 pp. Illustrated. Illustrates and describes the installation of permanent concrete interlocking tile, tile with glass insets, flat tile and channel tile, on all types of industrial plants and other buildings with flat and pitched surfaces.  
Standards. Booklet. 8 1/2 x 11 in. 40 pp. Illustrated with full-page drawings. Gives full details of all forms of roof construction of steel structure, ridge and gutter construction, purlin arrangement, spacing, etc., for standard roofs.
- Johns-Manville, Inc., Madison Ave. & 41st St., New York, N. Y.**  
Johns-Manville Building Materials. Book. 8 1/2 x 11 in. 100 pp. Illustrated. A comprehensive catalog of various types of roofing for all forms of construction. Details of wall, floor and ceiling insulation; asbestos wood for fireproof construction; waterproofing, etc.  
Johns-Manville Asbestos Shingles. Booklet. 8 1/2 x 11 in. 24 pp. Illustrated. This booklet is profusely illustrated in colors, showing some very artistic blends of asbestos shingles with various types of architecture. Contains many valuable suggestions for the architect.
- Ludowici-Celadon Company, 104 So. Michigan Ave., Chicago, Ill.**  
"Ancient" Tapered Mission Tiles. Leaflet. 8 1/2 x 11 in. 4 pp. Illustrated. For architects who desire something out of the ordinary, this leaflet has been prepared. Describes briefly our "Ancient" Tapered Mission Tiles, hand-made, with full corners and designed to be applied with irregular exposures.
- New Jersey Zinc Company, 160 Front St., New York, N. Y.**  
Standing Seam Horse Head Zinc Roofing. Booklet outlining the adaptability of this roofing for many types of buildings. Illustrated with sketches showing how roofing is applied. Also describes lasting qualities, appearance, etc.  
Once in a Lifetime. Booklet describing conductors, gutters and standing seam roofing made from Horse Head Zinc. Contains information on their economy and durability. Illustrated.
- Richardson Company, The, Lockland, Ohio.**  
Roofs of Distinction. Booklet. 5 x 6 3/4 in. 22 pp. Illustrated in 4 colors and black and white.  
Gives process of roofing manufacture. Has color charts showing four shingles of different colors blended in same roof. Lists and describes Richardson Products.  
Roofing on the Farm. Booklet. 5 x 6 3/4 in. 22 pp. Illustrated in 4 colors and black and white.  
A solution to farm roofing problems.  
Viskalt Roof Specifications. Booklet. 7 x 12 in. 10 pp. Illustrated. Specifications for applying Viskalt Membrane built on roofs.  
A Specific Way to Outwit the Weather. Booklet. 10 x 12 in. 4 pp. Illustrated.  
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# SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 80

## ROOFING—Continued

- Ruberoid Co., The** (formerly the Standard Paint Co.), 95 Madison Avenue, New York, N. Y.  
Instructions for Laying Built-up Roofs. Booklet.  $8\frac{1}{2}$  x 11 in. Illustrated.
- Ruberoid Strip-Shingle.** Booklet.  $3\frac{1}{2}$  x  $6\frac{1}{4}$  in. 16 pp. Illustrated in color.
- United Alloy Steel Corporation,** Canton, Ohio.  
Better Sheet Metal.  $8\frac{1}{2}$  x 11 in. 128 pp. and cover. Illustrated. Shows the many uses of Toncan Metal with many pictures of buildings, names of architects, etc., also tables of weights and other useful specification data.
- Weatherbest Stained Shingle Co., Inc.,** North Tonawanda, N. Y.  
The Construction of Weatherbest Thatch Roofs. Booklet. 8 x 11 in. 16 pp. Illustrated. A well written, carefully prepared book giving in detail the proper construction for securing the Thatch Effect roof by the use of WEATHERBEST Stained Shingles. Contains full-page reproductions of WEATHERBEST homes and drawings showing detail of roof construction. Various Pamphlets. Illustrated. Each pamphlet exemplifies some specific quality of WEATHERBEST Stained Shingles used for roofs and sidewalls.

## RUGS, IMPORTED

- Kent-Costikyan Trading Company, Inc.,** 484 Fifth Ave., New York, N. Y.  
Rugs. Catalogue.  $9\frac{1}{2}$  x  $6\frac{1}{2}$ . 56 pp. Illustrated. Illustrates and describes an unusual collection of Oriental and Occidental rugs with stock list.

## SASH CHAIN

- American Chain Company, Inc.,** Bridgeport, Conn.  
American Sash Chain. Booklet. 6 x 9. 16 pp. Illustrated. Describes and illustrates American Sash Chain and Sash Fixtures.
- Smith & Egge Mfg. Co., The,** Bridgeport, Conn.  
Chain Catalog. 6 x  $8\frac{1}{2}$  in. 24 pp. Illustrated. Covers complete line of chains.

## SASH CORD

- Samson Cordage Works,** Boston, Mass.  
Catalog.  $3\frac{1}{2}$  x  $6\frac{1}{4}$  in. 24 pp. Illustrated. Covers complete line of rope and cord.

## SCREENS

- Athey Company,** 6015 West 65th St., Chicago, Ill.  
The Athey Perennial Window Shade. An accordion plaited window shade, made from translucent Herringbone woven Coutil cloth, which raises from the bottom and lowers from the top. It eliminates awnings, affords ventilation, can be dry cleaned and will wear indefinitely.
- The Higgin Manufacturing Co.,** Newport, Ky.  
Your Home Screened the Higgin Way. Booklet.  $8\frac{1}{2}$  x  $11\frac{1}{2}$  in. 13 pp. Illustrated in colors. Complete description of Higgin Screens, designed to meet every need.

## SEWAGE DISPOSAL

- Kewanee Private Utilities,** 442 Franklin St., Kewanee, Ill.  
Specification Sheets,  $7\frac{3}{4}$  x  $10\frac{1}{4}$  in. 40 pp. Illustrated. Detailed drawings and specifications covering water supply and sewage disposal systems.

## SHEATHING

- Bishopric Manufacturing Co.,** 103 Este Ave., Cincinnati, Ohio.  
For All Time and Clime. Booklet. 6 x 9 in. 48 pp. Illustrated. Describing the use of Bishopric stucco base and Bishopric plaster base.

## STAINS—See Paints, Varnishes, Wood Finishes

## STEEL COMPARTMENTS

- Henry Weis Mfg. Co.,** Atchison, Kan.  
Catalog No. 11, 1923 Edition.  $8\frac{1}{2}$  x 11 in. 32 pp. Illustrated. Shows Toilet, Shower and Dressing-room compartment, and Hospital Cubical installations in all types of buildings; describes "WEISTEEL" compartments in detail; gives complete specifications and suggested specifications for architects' use; includes blueprints of suggested layouts, lists of Standard sizes and units.

## STONE, BUILDING

- Indiana Limestone Quarrymen's Association,** Box 766, Bedford, Ind.  
Volume 3, Series A-3. Standard Specifications for Cut Indiana Limestone work.  $8\frac{1}{2}$  x 11 in. 56 pp. Containing specifications and supplementary data relating to the best methods of specifying and using this stone for all building purposes.
- Vol. 1. Series B. Indiana Limestone Library. 6 x 9 in. 36 pp. Illustrated. Giving general information regarding Indiana Limestone, its physical characteristics, etc.
- Vol. 4. Series B. Booklet. New Edition.  $8\frac{1}{2}$  x 11 in. 64 pp. Illustrated. Indiana Limestone as used in Banks.
- Volume 5. Series B. Indiana Limestone Library. Portfolio.  $11\frac{1}{4}$  x  $8\frac{3}{4}$  in. Illustrated. Describes and illustrates the use of stone for small houses with floor plans of each.
- Tompkins-Kiel Marble Company,** 505 Fifth Ave., New York, N. Y.  
Reproductions in natural colors of imported and domestic marbles and stone for interior and exterior uses.
- Bulletins.  $9\frac{1}{4}$  x  $12\frac{1}{4}$  in. Illustrating buildings of various types in which Tompkins-Kiel Marble Company's imported and domestic marbles and stone have been used.

## STORE FRONTS

- Brasco Manufacturing Co.,** 5025-35 South Wabash Avenue, Chicago, Ill.  
Portfolio.  $8\frac{1}{2}$  x 11 in. 32 pp. Illustrated. Selected examples of Brasco Copper Store Fronts suitable for different businesses and varying conditions of locations.
- Catalogue 28.  $8\frac{1}{2}$  x  $10\frac{3}{4}$  in. 20 pp. Illustrated with plates. Details of Brasco Copper Store front construction. Also show-cases, ventilator sashes.
- Detail Sheets. Set of five sheets giving details and suggestions for store front designing enclosed in envelope convenient for filing.

## STORE FRONTS—Continued

- Kawneer Co., The,** Niles, Mich.  
A Collection of Successful Designs. Catalog.  $9\frac{1}{4}$  x  $6\frac{1}{2}$  in. 64 pp. Illustrated. Showing by use of drawings and photographs many types of Kawneer Solid Copper Store Fronts.
- Zouri Drawn Metals Company,** Chicago Heights, Ill.  
Zouri Safety Key-Set Store Front Construction. Catalogue.  $8\frac{1}{2}$  x  $10\frac{1}{2}$  in. 60 pp. Illustrated. Complete information with detailed sheets and installation instructions convenient for architects' files.
- International Store Front Construction. Catalogue.  $8\frac{1}{2}$  x 10 in. 70 pp. Illustrated. Complete information with detailed sheets and installation instructions convenient for architects' files.

## STUCCO

- Bishopric Manufacturing Co.,** 103 Este Ave., Cincinnati, Ohio.  
For All Time and Clime. Booklet. 6 x 9 in. 48 pp. Illustrated. Describing the use of Bishopric stucco base and Bishopric plaster base.

## STUCCO BASES

- Bishopric Manufacturing Co.,** 103 Este Ave., Cincinnati, Ohio.  
Specifications and Working Details. Booklet.  $7\frac{3}{4}$  x  $10\frac{1}{4}$  in. Illustrated. Contains plainly written instructions for the use of stucco, stucco base, plaster base and insulation base.

## STUCCO, MAGNESITE

- American Magnestone Corporation,** Springfield, Ill.  
Catalog. 13 pp. Describes the quality, beauty and strength of Magnestone.
- Muller & Co., Franklyn R.,** Waukegan, Ill.  
Everlastic Magnesite Stucco. Booklet.  $8\frac{1}{2}$  x 11 in.

## TERRA COTTA

- National Terra Cotta Society,** 19 West 44th St., New York, N. Y.  
Standard Specification for the Manufacturer.  $8\frac{1}{2}$  x 11 in. 12 pp. Furnishing and Setting of Terra Cotta, consisting of complete detail Specification, Glossary of Terms Relating to Terra Cotta and Short Form Specification for incorporating in Architect's Specifications.
- Color in Architecture. Illustrated brochure  $8\frac{1}{2}$  in. containing a treatise upon the basic principles of color in architectural design, illustrating early European and modern American examples.
- Present Day Schools.  $8\frac{1}{2}$  x 11 in. 32 pp. Illustrating 42 examples of school architecture with article upon school building design by James O. Betelle, A. I. A.
- Better Banks.  $8\frac{1}{2}$  x 11 in. 32 pp. Illustrating many banking buildings in terra cotta with an article on its use in bank design by Alfred C. Bossom, Architect.
- Northwestern Terra Cotta Co., The,** 2525 Clybourn Ave., Chicago, Ill.  
Booklet.  $8\frac{1}{4}$  x 11 in. 77 pp. Illustrated. Showing in a concise way the usefulness of terra cotta.

## TERRAZZO

- Galassi Company,** 153 East 38th Street, New York, N. Y.  
Suggesting a Standard Specification for Terrazzo Work Booklet. Specifications for the use of terrazzo.

## THERMOSTATS—See Heating Equipment

## TILE, FLOOR AND WALL

- Associated Tile Manufacturers, The,** Beaver Falls, Pa.  
Basic Information Booklet.  $7\frac{1}{2}$  x  $10\frac{1}{2}$  in. 24 pp. Illustrated. Ask for Booklet K-200.
- A publication issued for architects, engineers and educators to acquaint them with methods of grading, derivation of sizes and shapes, variety of colors, kind of finishes, nomenclature and ingredients and processes insofar as they lead to a better understanding of the product and its uses.
- Basic Specifications and Related Documents, Booklet.  $7\frac{1}{2}$  x  $10\frac{1}{2}$  in. 38 pp. Ask for Booklet K-300.
- The Basic Specification proper gives in detail the procedure to be followed with respect to any kind of tile installation in connection with practically every type of construction. The Related Documents or work sheets are designed to call attention to optional application methods and materials.
- Swimming Pools. Booklet.  $8\frac{1}{2}$  x 11 in. 32 pp. Illustrated. Issued for the use of architects and engineers as a handbook on swimming pools and their construction.
- Bringing the Crowds to Your Market. Booklet.  $8\frac{1}{2}$  x 11 in. 16 pp. Illustrated in color. Shows use of tile for the modern sanitary market.

## TILE, HOLLOW

- National Fire Proofing Co.,** 250 Federal St., Pittsburgh, Pa.  
Standard Wall Construction Bulletin 174.  $8\frac{1}{2}$  x 11 in. 32 pp. Illustrated. A treatise on the subject of hollow tile wall construction.
- Natco on the Farm.  $8\frac{1}{2}$  x 11 in. 38 pp. Illustrated. A treatise on the subject of fire safe and permanent farm building construction.
- Natco Homes and Garages. Booklet. 7 x 10 in. 32 pp. Illustrated. Showing the use of Natco Hollow Tile for private residences.

## VACUUM CLEANING APPARATUS

- The Spencer Turbine Company,** Hartford, Conn.  
Vacuum Cleaning Apparatus for all purposes. Booklet. 32 pp. Illustrated. Complete information on product, showing prominent buildings equipped with this system.

## VALVES

- Crane Co.,** 836 S. Michigan Ave., Chicago, Ill.  
No. 50 Steam Pocket Catalog. 4 x  $6\frac{1}{2}$  in. 775 pp. Illustrated. Describes the complete line of the Crane Co.
- Gorton & Lidgerwood Co.,** 96 Liberty St., New York, N. Y.  
Gorton Quarter-Turn Packing-Lock Valves. Booklet.  $4\frac{1}{4}$  x  $7\frac{1}{4}$  in. 32 pp. Illustrated. Describing a new type of valve for all systems of steam, hot water and vacuum heating.





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## SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—Continued from page 82

### VALVES—Continued

- Illinois Engineering Co.**, Racine Ave., at 21st St., Chicago, Ill.  
Catalogue.  $8\frac{1}{2} \times 11$  in. 88 pp. Illustrated.
- Jenkins Bros.**, 80 White Street, New York.  
The Valve Behind a Good Heating System. Booklet  $4\frac{1}{2} \times 7\frac{1}{4}$  in. 16 pp. Color plates. Description of Jenkins Radiator Valves for steam and hot water, and brass valves used as boiler connections.
- Jenkins Valves for Plumbing Service. Booklet.  $4\frac{1}{2} \times 7\frac{1}{4}$  in. 16 pp. Illustrated. Description of Jenkins Brass Globe, Angle Check and Gate Valves commonly used in home plumbing, and Iron Body Valves used for larger plumbing installations.

### VARNISH—See Paints, Stains, Varnishes

### VENETIAN BLINDS

- Burlington Venetian Blind Co.**, Burlington, Vt.  
Venetian Blinds. Booklet.  $4\frac{1}{2} \times 7\frac{1}{2}$  in. 32 pp. Illustrated. Describes the "Burlington" Venetian blinds, method of operation, advantages of installation to obtain perfect control of light in the room.

### VENTILATION

- Globe Ventilator Company**, 205 River Street, Troy, N. Y.  
Globe Ventilators Catalog.  $6 \times 9$  in. 32 pp. Illustrated profusely. Catalog gives complete data on "Globe" ventilators as to sizes, dimensions, gauges of material and table of capacities. It illustrates many different types of buildings on which "Globe" ventilators are in successful service, showing their adaptability to meet varying requirements.
- Van Zile Ventilating Corporation**, 280 Madison Avenue, New York, N. Y.  
The Ventador Booklet.  $6\frac{1}{2} \times 3\frac{1}{2}$  in. 16 pp. Illustrated. Describes and illustrates the use of the Ventador for Hotels, Clubs, Offices, etc.

### WALL PAPER

- W. H. S. Lloyd Company**, 105-7 West 40th St., New York City.  
Architects Book. 301 pp.  $8 \times 5\frac{3}{4}$  in. Illustrated. Architects find this book of great service in selecting grades of wall paper. While it shows but a very limited selection of Lloyd Papers, it gives a fair idea of their quality, patterns and colors.

### WASTE RECEPTACLES

- Cortes Ward Company, Inc.**, 245 West 55th St., New York, N. Y.  
Waste Receptacles. Catalogue contains complete illustrations and specifications of the different uses of Solar Self Closing Receptacles.

### WATERPROOFING

- Carey Company, The Philip**, Lockland, Cincinnati, Ohio.  
Waterproofing Specification Book.  $8\frac{1}{2} \times 11$  in. 52 pp.
- The General Fireproofing Company, Youngstown, Ohio.**  
Waterproofing Handbook. Booklet.  $8\frac{1}{2} \times 11$  in. 72 pp. Illustrated. Thoroughly covers subject of waterproofing concrete, wood and steel preservatives, dustproofing and hardening concrete floors, and accelerating the setting of concrete. Free distribution.
- Ruberoid Co., The**, 95 Madison Ave., New York.  
Impervit. Circular.  $8\frac{1}{2} \times 11$  in. 4 pp. Illustrated. An integral water-proofing compound for concrete, stucco, cement, mortar, etc.
- Sandusky Cement Co.**, Dept. F, Cleveland, Ohio.  
Medusa Waterproofing. Booklet.  $6\frac{1}{2} \times 9$  in. 38 pp. Illustrated.
- Sonneborn Sons, Inc., L.**, 116 Fifth Ave., New York, N. Y.  
Pamphlet.  $3\frac{3}{4} \times 8\frac{1}{4}$  in. 8 pp. Explanation of waterproofing principles. Specifications for waterproofing walls, floors, swimming pools and treatment of concrete, stucco and mortar.

### WATER PURIFIERS

- Wallace & Tiernan Company**, Newark, N. J.  
Protecting N. Y. Water Supply. Booklet.  $10 \times 7$  in. 24 pp. Illustrated. Describes the chlorinating equipment used for sterilizing N. Y. City water supply; also equipment suitable for sterilizing water supplies of municipalities, industrial plants, private residences, etc.

### WATER SOFTENERS

- Permutit Company, The**, 440 Fourth Ave., New York, N. Y.  
Permutit-Water softened to No (Zero) Hardness. Booklet.  $8\frac{1}{2} \times 11$  in. 32 pp. Describing the original Zeolite process of softening water to zero hardness. An essential for homes, hotels, apartment houses, swimming pools, laundries, textile mills, paper mills, ice plants, etc., in hard water districts.

### WEATHER STRIPS

- Monarch Metal Products Co.**, 5000 Penrose St., St. Louis, Mo.  
Monarch Metal Weatherslips, A. I. A. Class 19 e 14. Manual.  $7\frac{1}{2} \times 10\frac{1}{4}$  in. 48 pp. Illustrated. Designed for architects and specification writers, showing details of windows, doors and other openings and the proper manner of installing Monarch strips. It also shows various strips made by this company. Fourteen pages are devoted to window leakage and radiation calculations.
- The Higgin Manufacturing Co.**, Newport, Ky.  
Higgin All-Metal Weather Strips. Booklet.  $6 \times 9$  in. 21 pp. Illustrated in colors. Describes various types of Higgin Weather Strips for sealing windows and doors against cold and dust.

### WINDOW HARDWARE, CASEMENT

- Hoffman Mfg. Co., Andrew**, 900 Steger Bldg., Chicago, Ill.  
Hoffman Casement Fixtures. Architects' Portfolio.  $8\frac{1}{2} \times 11$  in. 30 pp. Loose-leaf. Scale details for mill-work, installation, etc., in new and old work.
- International Casement Company**, Jamestown, N. Y.  
International Casements. Catalog.  $8\frac{1}{2} \times 11$  in. 224 pp. Illustrated. Valuable book, containing photographs and measured drawings of all types of buildings, showing casement windows.

### WINDOW HARDWARE, CASEMENT—Continued

- Monarch Metal Products Co.**, 5000 Penrose St., St. Louis, Mo.  
Monarch Casement Hardware. A. I. A. Class 27 c. 2. Manual.  $7\frac{1}{2} \times 10\frac{1}{4}$  in. 20 pp. Shows details of casement windows and manner of installing Monarch casement hardware, for both outswinging and inswinging types. Monarch control locks are designed for installation under sill and to operate outswinging casements without removing screens.
- Richards-Wilcox Mfg. Co.**, Aurora, Ill.  
Casement Window Hardware. Booklet. 24 pp.  $8\frac{1}{2} \times 11$  in. Illustrated. Shows typical installations, detail drawings, construction details, blue-prints if desired. Describes Air-way Multifold Window hardware.

### WINDOWS, CASEMENT

- Crittall Casement Window Co.**, 10951 Hearn Ave., Detroit, Mich.  
Catalog No. 22.  $9 \times 12$  in. 76 pp. Illustrated. Photographs of actual work accompanied by scale details for casements and composite steel windows for banks, office buildings, hospitals and residences.
- Hoffman Mfg. Co., Andrew**, 900 Steger Bldg., Chicago, Ill.  
Hoffman Casements. Architects' Portfolio.  $8\frac{1}{2} \times 11$  in. 30 pp. Loose-leaf. Scale details for mill-work, installation, etc., in new and old work.
- Hope & Sons, Henry**, 103 Park Ave., New York, N. Y.  
Catalog.  $12\frac{1}{4} \times 18\frac{1}{2}$  in. 30 pp. Illustrated. Full size details of outward and inward opening casements.

### WINDOWS, STEEL AND BRONZE

- Detroit Steel Products Company**, Detroit, Mich.  
Fenestra Basement Windows. Booklet.  $3\frac{3}{8} \times 6\frac{1}{4}$  in. 16 pp. Illustrated. Describes steel basement windows, their advantages, details and specifications for installation.
- Fenestra Reversible Ventilator Windows**. Booklet.  $8\frac{1}{2} \times 11$  in. 20 pp. Illustrated. Describes the details of this new model window, as well as the variety it offers for attractive architectural design.
- Fenestra Counter-Balanced Windows**. Catalog.  $8\frac{1}{2} \times 11$  in. 111 pp. Illustrated. Details and specifications are thoroughly covered in the Fenestra General Catalog.
- Fenestra Industrial Window Walls**. Catalog.  $8\frac{1}{2} \times 11$  in. 111 pp. Illustrated. Details and specifications, with photographic illustrations, are thoroughly covered in the Fenestra General Catalog.
- International Casement Company, Inc.**, Jamestown, N. Y.  
Catalogue.  $8\frac{1}{2} \times 11$  in. 223 pp. Complete in its description of International Windows, detailed drawings, photographs and specifications.  
Booklet.  $8 \times 5$  in. Prepared for the home builder and to assist the architect in presenting information on casement windows.  
Folders.  $8\frac{1}{2} \times 11$  in. Detailed drawings and specifications on Austral windows for banks, industrial buildings and office buildings.
- The Kawneer Company**, Niles, Mich.  
Kawneer Simplex Windows. Catalog.  $8\frac{1}{2} \times 10\frac{1}{4}$  in. 16 pp. Illustrated. Complete information, with measured details, of Kawneer Simplex Weightless Reversible Window Fixtures, made of solid bronze. Shows installations in residences and buildings of all sorts.  
Detail Sheets and Installation Instructions. Valuable for architects and builders.
- Truscon Steel Company**, 250 W. Lafayette Blvd., Detroit, Mich.  
Truscon Steel Windows. Catalog.  $8\frac{1}{2} \times 11$  in. 80 pp. Illustrated. Contains complete data on all types of Truscon Steel Windows.

### WOOD—See also Millwork

- American Walnut Mfrs. Association**, 618 So. Michigan Blvd., Chicago, Ill.  
American Walnut. Booklet.  $7 \times 9$  in. 45 pp. Illustrated. A very useful and interesting little book on the use of Walnut in Fine Furniture with illustrations of pieces by the most notable furniture-makers from the time of the Renaissance down to the present.  
Real American Walnut Furniture. Folder.  $8\frac{1}{2} \times 11$  in. 4 pp. Illustrated. Tells how to identify the genuine and avoid the substitute in buying "Walnut" furniture.
- Curtis Companies Service Bureau**, Clinton, Iowa.  
Better Built Homes, Vols. XV-XVIII, incl. Booklet.  $9 \times 12$  in. 40 pp. Illustrated. Designs for houses of five to eight rooms, respectively, in several authentic types, by Trowbridge & Ackerman, architects, for the Curtis Companies.
- Mahogany Association, Inc.**, 1133 Broadway, New York.  
Booklet.  $6 \times 8$  in. "Stately Mahogany" giving a general description of mahogany, where found and its uses.  
Booklet.  $6 \times 8$  in. "Historic Mahogany." A monograph of period mahogany fully illustrated with pen drawings.  
Booklet.  $6 \times 8$  in. Architectural Woodwork of Mahogany. 32 pp., fully illustrated with photographs of mahogany panelings and containing much information of interest to architects.
- Matthews Bros. Mfg. Company**, Milwaukee, Wis.  
Architectural Woodwork. Catalog.  $9 \times 12$  in. 34 pp. Illustrated. This is the only catalog we issue, and contains views showing both exteriors and interiors of banks, private residences, and office buildings in which this Company's woodwork has been installed.
- Pacific Lumber Company**, 332 So. Michigan Ave., Chicago, Ill.  
California Redwood. Booklet.  $9 \times 12$  in. 36 pp. Illustrated. Describes in a general way the production, manufacture and various uses of California Redwood.  
Redwood Construction Digest. Booklet.  $8\frac{1}{2} \times 11$  in. 16 pp. Illustrated. Redwood and Its Uses in the Construction Field. Contains specifications and other information of interest to architects and builders generally.

### WOOD FINISHES—See Paints, Varnishes, Stains



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Over 1000 Schools Now Equipped  
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Speedy in operation because the job is done mechanically and saves much labor. Safe because the sidewalk openings are always protected, whether or not hoist is in operation. Economical because one or two men can remove all ashes instead of the usual 4 to 5 men, and the electric models use surprisingly little current.

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72	"	" New Jersey
193	"	" New York
113	"	" Ohio
79	"	" Pennsylvania

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GILLIS & GEOGHEGAN  
544 West Broadway, New York

Operating costs of Model D Electric Hoist illustrated:  
Actual cost of current at this plant... 3 cts. per Kwh.  
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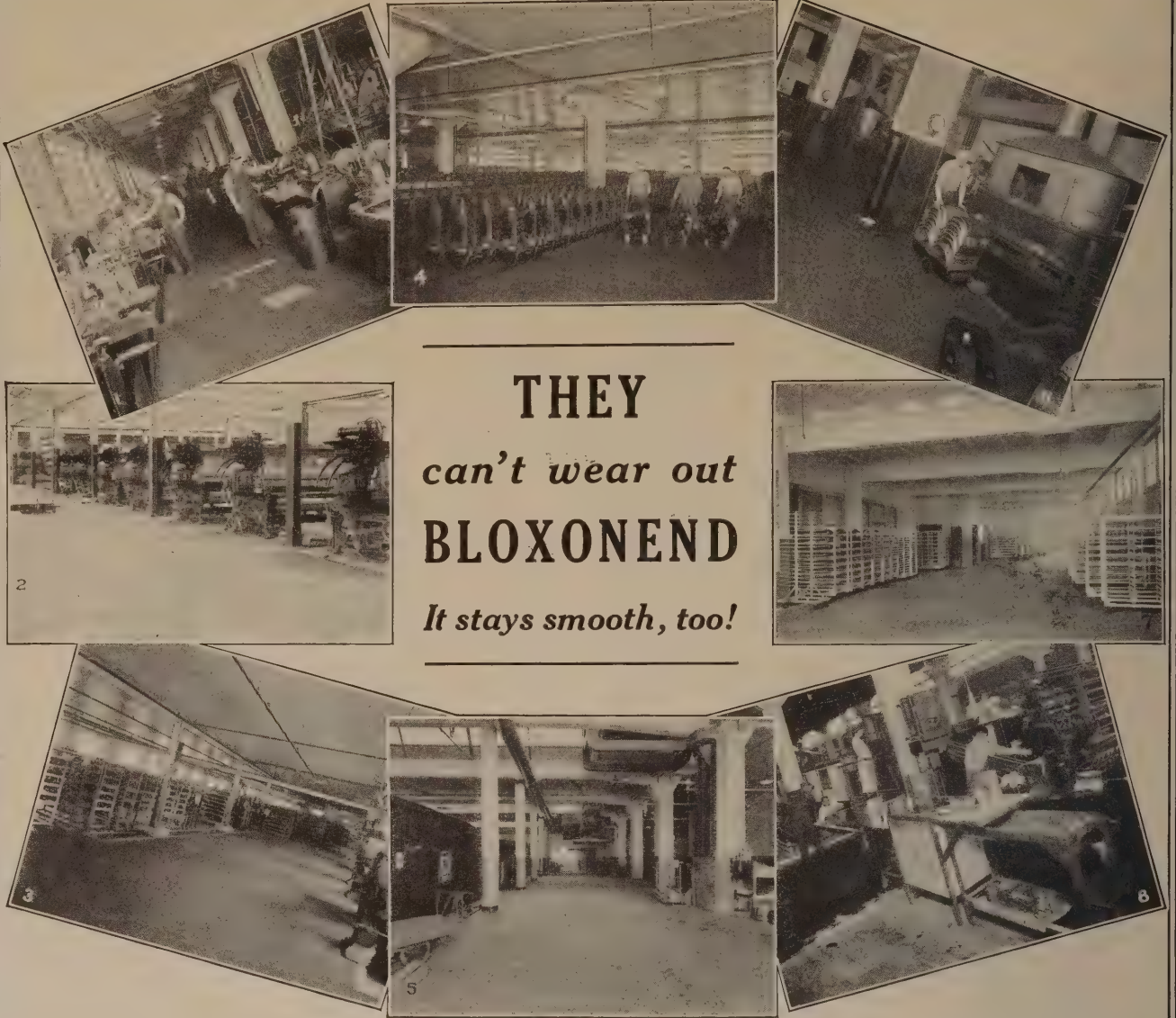
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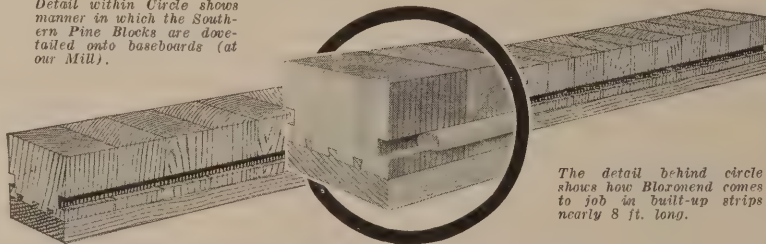
3—Shoe Factory. International Shoe Co., Olney, Ill. An ideal floor for trucking.

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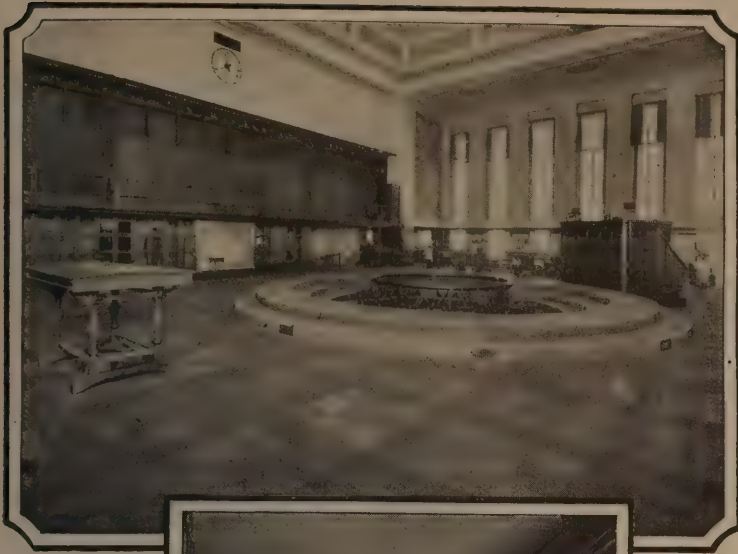
shades of brown harmonize readily with almost any furnishing, and a considerable variety of design can be worked out with the different colors and the many sizes in which it is furnished. Armstrong's Cork Tile is tough and durable, almost non-absorbent and, hence, easily cleaned. It can be laid over any smooth base and can be depended upon for many years of wholly satisfactory service.

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Above. Trading floor of the Cotton Exchange, N. Y. Donn Barber, architect. The floor of Gold-Seal Cork Tile insures the maximum of comfort and quiet.



In the R. L. Polk & Co. Building, Detroit, Richard Mair, architect, the Gold-Seal Battleship Linoleum floor is dignified, quiet, and serviceable.



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Architectural skill finds a fertile field for expression in the floors. Suitability, of course, is of first importance. Then, too, the right floor must be comfortable, quiet and durable. Bonded Floors embody these qualities to a surprising extent.

In keeping with its aim to serve, Bonded Floors Company installs practically all types of resilient floors. As a result, the architect has at his disposal a variety of materials, colors, and designs, thereby making it possible to select floors that fit any decorative scheme or type of interior.

This wide range of choice, added to Bonded Floors scientific installation, assures you a satisfactory solution of every resilient floor problem.

Literature descriptive of Bonded Floors, as well as specifications and details, will be gladly furnished on request.

## BONDED FLOORS COMPANY, INC.

Division of Congoleum Company, Inc.

Manufacturers • Engineers • Contractors

Main Offices: 1421 Chestnut Street, Philadelphia, Pa.

New York • Boston • Philadelphia • Cleveland  
Detroit • Chicago • Kansas City

San Francisco • Los Angeles

(Distributors in other principal cities)



Every floor laid according to Bonded Floors specifications is backed by a Surety Bond issued by the U. S. Fidelity and Guaranty Company. The bond insures freedom from repair expense due to defects in materials or workmanship.





*Above, The Steiner Building, Minneapolis, Brasco equipped.*

*At the left, a Fargo, N. D., garage with Brascoed show windows.*

## ***Brasco Preference Knows no Boundaries!***

**These Cities, Northwest and Southwest, Are Further Evidence of Brasco Popularity**

Live, growing sections of the country testify convincingly to Brasco supremacy. Northwest, southwest and everywhere—architects find that Brasco not only meets best all store front requirements, but actually leads in the development of new and better designs and more effective construction.

The elegance of line and grace of proportion add to the appearance of any store building, large or small, simple or elaborate.

Owners and builders are invariably pleased with Brasco Fronts. Erection is easy and economical. Only standard mill-work is required. Less lumber and labor are needed than for any other type.

And Brasco setting is safest for plate glass.

The grip is unusually wide and firm yet supple enough to permit flexure and absorb vibration. This important feature, plus our patented method of indirect screw fastening, eliminates the danger of glass breakage and cost of replacements.

In any weather, windows are clear and display unmarred with the Brasco system of ventilation and drainage. Highest quality marks every unit in Brasco construction, guaranteeing permanence and eliminating up-keep.

We will gladly send an actual section of Brasco sash and full-sized detail sheets on request. With these, the superiority of Brasco design and materials is at once apparent.

BRASCO MANUFACTURING COMPANY  
5031 S. Wabash Avenue Chicago, Illinois

***Brasco***  
**COPPER STORE FRONTS**



*Simons - Wiles Motor Co. Building, Kansas City, Mo., and at right, the Peacock Shop, Little Rock, Ark., with Brasco Fronts.*





# THIS NEW WINDOW IS MADE OF NICKEL-SILVER OR SOLID COPPER



**Made from Heavy Drawn Metal**

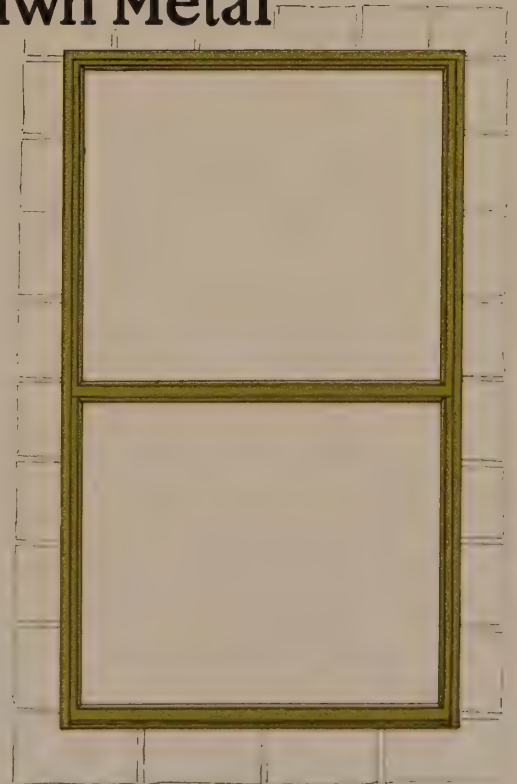
**All joints thoroughly welded together ~**

**Weight Hung or Casement Types.**

**Adequate Weathering Provided by  
Interlocking Mouldings for All  
Engaging Parts.**

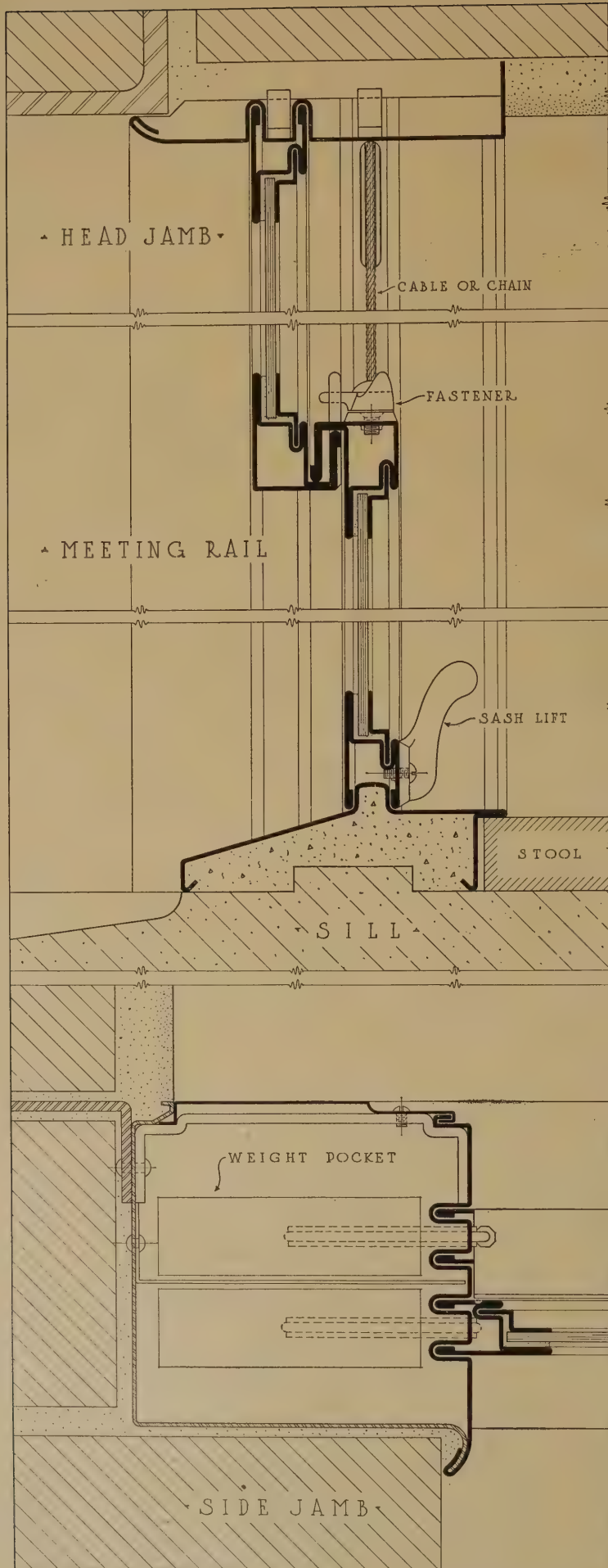
**Sturdy Construction Gives Lasting  
Service and Permanent Materials  
Assure Satisfactory Operation  
with No Up-keep Cost.**

THE  
**Kawneer**  
COMPANY  
NILES, MICHIGAN



**SEE OTHER SIDE FOR CONSTRUCTION DETAILS**





# Kawneer WINDOWS

In Nickel—Silver or  
Solid Copper.

Made from Heavy  
Drawn Metal Mould-  
ings. All joints thor-  
oughly welded  
together.

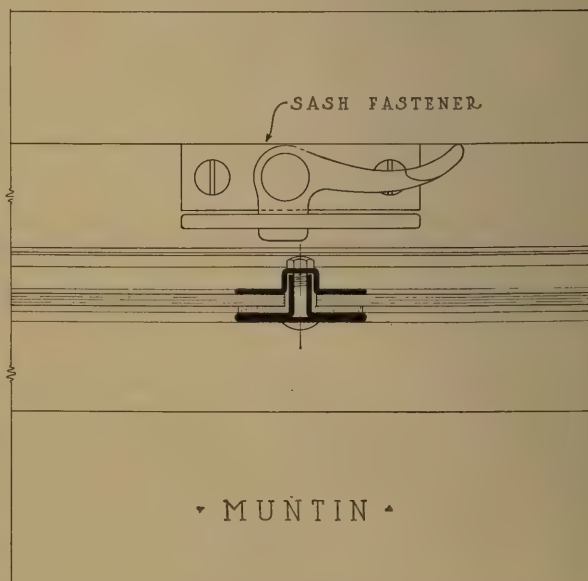
*Half Size Details are Shown of  
Weight-Hung Type.*

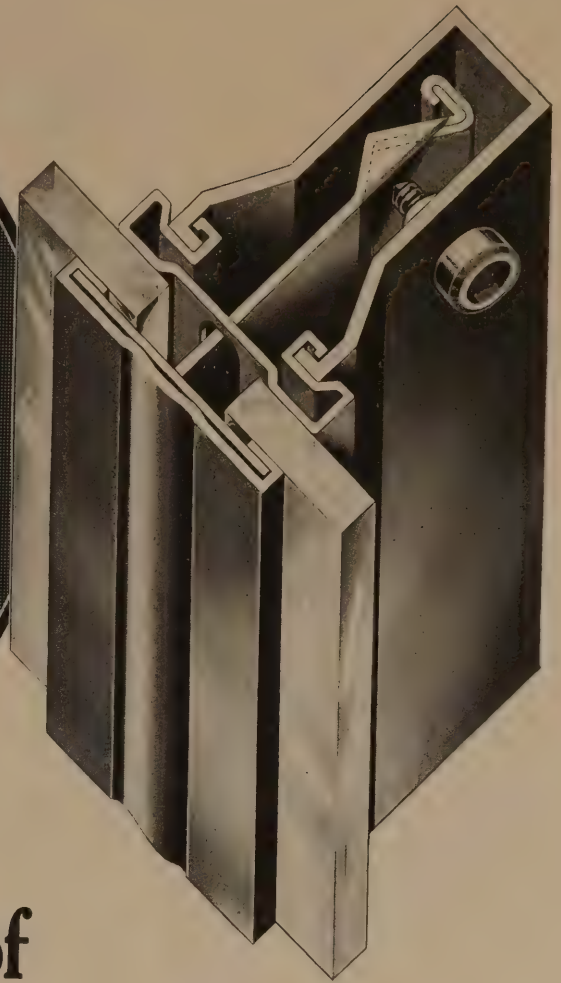
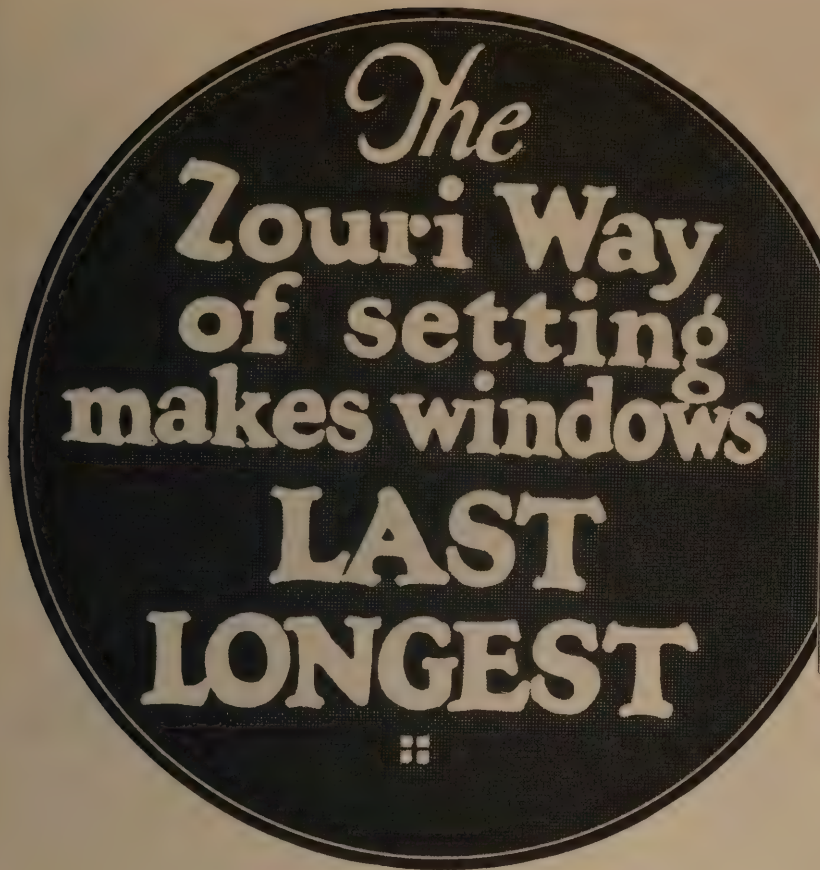
*Made Also in Casement Type.*

Full Size Models  
Shown Upon Request.

Made by the Manu-  
facturers of Kawneer  
Resilient Store Front  
Construction.

THE  
**Kawneer**  
COMPANY  
NILES, MICHIGAN





## Performance Is Proof

It is a matter of record that the tremendous requirements of the automotive industry together with the great annual waste by breakage of big display windows in buildings of all kinds, has in recent years gradually raised the cost of good plate glass. As a result it has become the concern of builders how to best protect their windows from such destructive forces as vibration, shock, wind pressure and distortion.

The Zouri Safety Metal Key-Set method has proved its unusual efficiency as a safety insurance. It is recognized by architect, contractor and builder as an outstanding factor in preserving windows—to make them LAST LONGEST. It is recognized and approved by the Underwriters' Laboratories.

Get the facts on Zouri Safety Key-Set store front construction. Write for our big illustrated catalog showing every phase of construction in detail.

# Zouri

## Safety Metal Store Fronts

prevent glass breakage during installation or from distortion after the glass is installed.

Murnane Self-Adjusting Setting Blocks bring the glass into firm and even contact with the full face of the rigid rabbet. Zouri Key-Set construction holds it there.

In Zouri sash the glass is held in place by indirect screw pressure—more certain and perfectly safe.

There's a distributor near you who will give you full details without obligation. Ask us for his name.

# Zouri Drawn Metals Company

FACTORY AND GENERAL OFFICES

1608 East End Avenue, Chicago Heights, Illinois



## COLUMNS

*that give individuality and permanence*

The column is remarkably effective when used in connection with exterior millwork for colonial architecture. Our experience in work of this kind enables us to faithfully carry out the architect's ideas and details in work of this character—a feature that is essential in obtaining individuality.

Koll Lock-Joint Wood Columns are architecturally correct in every detail, from cap to base. In addition, they offer unusual permanence—made possible by the closely knitted, interlocking joints—a patented Koll design.

We offer many advantages and economies made possible by broad manufacturing facilities, intensive specialization, and 26 years' experience as America's largest designers and builders of all kinds of fine columns. You will find our catalog 1-47 full of interesting information. We will send it on request.

Hartmann-Sanders Co., 2187 Elston Ave., Chicago  
Showroom: 6 East 39th St., New York City

**HARTMANN-SANDERS**

*Koll Lock-Joint Columns—Pergolas—Rose Arbors  
Garden Furniture and Accessories*

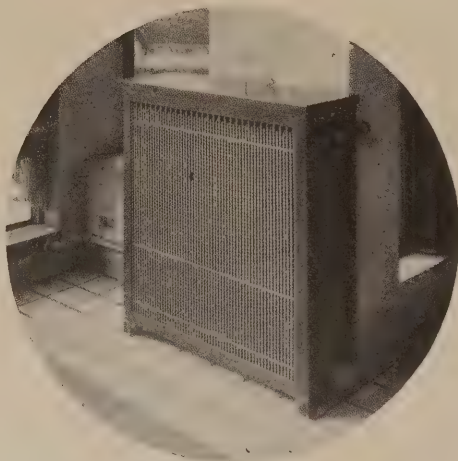


THEY CANNOT COME APART

No. 26



Architect, Robt. J. Reiley



Well Planned Interiors for Hotel Lobbies, Clubs,  
Automobile Show Rooms

*Should Include*

### TRICO ART METAL RADIATOR FURNITURE

Made of heavy gauge steel, TRICO gives a lifetime of service. Finished to match any color scheme in six coats of enamel, baked on. Protects walls and draperies from radiator soiling. Every top contains a patented humidifier that moistens the air and makes a lower temperature comfortable. Made in three attractive styles.

1. Standard Shield
2. Square Rod Grille (Illustrated)
3. Cane Grille

*Full particulars on request*

**ART METAL RADIATOR COVER CO.**  
2241 Oakdale Avenue, Chicago

# Stewart's

**IRON FENCE** STANDARD  
OF THE WORLD



There is a distinctive Stewart design for the correct completion of any architectural plan, for town or suburban home, modest bungalow or country estate.

*Book of Designs "C" sent upon request*

*We also manufacture grilles, balconies, partition railings, folding gates, miscellaneous iron and wire work and chain-link wire fence.*

*Architects' designs executed in strict accordance with their specifications*

**THE STEWART IRON WORKS COMPANY**  
INCORPORATED  
CINCINNATI, OHIO, U.S.A.  
"The World's Greatest Iron Fence Builders"





The Meyer Kiser Bank, Indianapolis, Ind.  
Vonnegut, Bohn & Mueller  
Architects - Indianapolis

## The Bank in ART METAL

**C**ONCENTRATED in this banking interior, so expressive of dignity and permanence, is the wealth of our long and mature experience in the furnishing of banks.

The faithful execution of the architect's ideas lends its added charm to the bronze doors, screens and many of the accessories. Filing equipment, busses, desks and counter work, chosen from ART METAL stock equipment bring their cooperation to accurate, efficient work.

ART METAL engineers offer a veritable storehouse of practical information to the architect. We will be pleased to place at your disposal, without obligation, our cooperation on your next project in the form of suggestions, sketches or estimates.

The booklet "The Banking House in ART METAL" has been of great interest to architects. We will gladly send you your copy on request.



Folding glass and bronze leaves that fold back as coin guards. Counter and cage equipment that makes bank work easier.

# Art Metal

JAMESTOWN

NEW YORK

Steel and Bronze Equipment for Banks :: Steel Office Equipment



# Why Redwood finish for exteriors and interiors?



**E**XPOSED to moisture and climatic changes, Redwood outlasts most other woods because during growth it is permeated with a *natural* preservative which protects it against all forms of fungus rot and decay. Boring worms and insects leave it alone. For rustic work, summer houses, lodges, porch, cornice or outside finish, Redwood is particularly adapted. There's no pitch to bleed through and mar paint. Properly seasoned Redwood does not warp, swell or shrink. It preserves the beauty of architectural design.

## Grading Rules for California Redwood

**Clear**—Can be secured in widths from 3" to 24"; Thicknesses 1" and upward. Shall be good and sound, free from knots, shakes or splits, except a fair proportion may contain pin knots showing on one face only. Will allow a reasonable amount of birdseye and sap not exceeding 4 percent of the area of all surfaces.

**Sap Clear**—Can be secured or "A" cured in widths from 3" to 12"; Thicknesses 1" to 2". Shall conform generally to grade of clear except that it may contain any amount of sap. Discolored sap, when sound, shall not be considered a defect.

*If the local dealer does not carry Redwood he can get it by referring to our nearest office.*

*Lists of TPL Co. Redwood millwork and lumber for all architectural and building construction purposes together with our book "California Redwood" will be sent on request.*

THE PACIFIC LUMBER CO. of Illinois  
CHICAGO NEW YORK CITY  
3063 McCormick Building 922 Pershing Square Bldg.  
832 South Michigan Avenue 100 East 42nd Street

THE PACIFIC LUMBER CO.  
SAN FRANCISCO LOS ANGELES  
Robert Dollar Building Central Building  
811 California Street 6th & Main Streets

**The Pacific Lumber Co.**  
**Redwood**

*The Largest Manufacturers and Distributors of California Redwood*

## Samson Spot Sash Cord



Trade Mark Reg. U. S. Pat. Off.

Made of extra quality stock, carefully inspected and guaranteed free from all imperfections of braid or finish.

*Does not contain the loaded centre often found in common cord, which increases the weight and price per foot and greatly decreases the durability over pulleys.*

Samson Spot Cord can be distinguished at a glance by our trade mark, the Colored Spots, used only with this quality.

The difference in first cost between Spot Cord and the cheapest kind for a whole house is small in comparison with the expense of replacing one broken cord.

*Send for sample card*

## Samson Cordage Works

Boston, Mass.

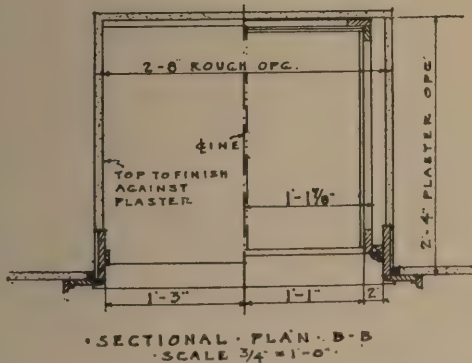
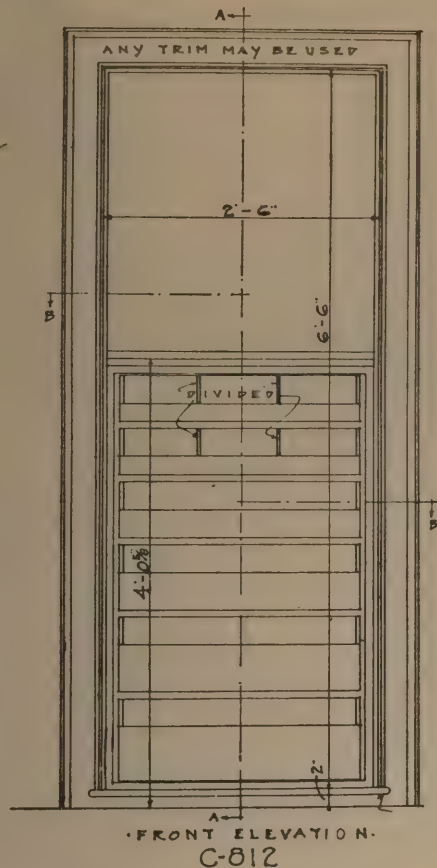
## THE CUTLER MAIL CHUTE

*manufactured in our own factory and installed by our own Experienced Factory Erectors, insuring uniform excellence of workmanship and prompt and satisfactory service.*

*Specify MODEL F Standard Equipment for Cutler quality at minimum cost. Send for form giving information required for estimating.*

CUTLER MAIL CHUTE CO.  
ROCHESTER, N. Y.

# CURTIS WOODWORK



**Tray Case C-812**

Any door and trim may be used to enclose this case. Door C-302 and trim C-1660 are illustrated.



*Little touches  
of beauty and convenience  
that will please your clients*

ARCHITECTS, builders, and home builders are all pleased with Curtis doors, windows, moldings and interior woodwork because of their good quality, sturdy construction and smooth surfaces.

There are many other Curtis items, however, that add beauty and convenience to the home.

Look through your detail sheets and you will surely find some of these specialties that just fit the home you are planning. The use of these sheets will save time in your drafting room and the articles when delivered at the job are all ready to set up with a minimum of labor.

The standardization of well designed woodwork is a step in the direction of popular appreciation of better homes.

Curtis designs are created by prominent architects.

We believe you will agree that they are creditable.

Get in touch with the nearest Curtis dealer and have him show you what practical and valuable service he can render.

## The Curtis Companies Service Bureau

18 Curtis Building, Clinton, Iowa

Curtis Companies, Inc., Clinton, Iowa

Curtis Detroit Co., Detroit, Mich.  
Curtis Bros. & Co., Clinton, Iowa  
Curtis & Yale Co., Wausau, Wis.  
Curtis Sash & Door Co., Sioux City, Iowa

Curtis, Towle & Paine Co., Lincoln, Nebr.  
Curtis, Towle & Paine Co., Topeka, Kans.  
Curtis-Yale-Holland Co., Minneapolis, Minn.  
Curtis Door & Sash Co., Chicago, Ill.

Sales Offices in: Pittsburgh - New York - Baltimore

Curtis Woodwork is sold by retail lumbermen east of the Rockies. Make sure the woodwork you buy bears this trademark—

**1866  
CURTIS**

The makers of Curtis Woodwork are proud to identify their products by this mark.





*Architects*  
Messrs. Holabird & Roche  
104 South Michigan Avenue  
Chicago, Illinois

MORTON HOTEL  
GRAND RAPIDS  
MICH.

*General Contractors*  
Owen, Ames & Kimball Company  
Grand Rapids, Michigan

**O**VER 2000 Plain Striped Mahogany Roddis Flush Doors were used in the above building.

Roddis Flush Doors are all glued with Waterproof Glue and guaranteed for two years. They are made 5-ply, in all woods, and inlaid in any and all designs.

Roddis Flush Doors are particularly adaptable for Clubs, Hotels, Apartments, Residences, Schools and Hospitals, as they are sound-proof as well as fire-resisting.

**RODDIS LUMBER and VENEER COMPANY**  
MARSHFIELD, WISCONSIN

Your home shelters those who are nearest and dearest to you; the quality of the materials that go into that home may well have your most careful thought.



## Saving $8\frac{1}{8}\%$ Labor Cost In Home Construction

An advertisement based on the personal experience of  
**★ ERNEST PETERSON, Contractor, ROCKFORD, ILL.**  
*(As stated in an audited Gould Report)*

**T**HE architect scrutinizes carefully every item in the building budget.

So much for lumber, so much for labor—can either of these amounts be trimmed a little without sacrificing the most important building requirement—sturdy construction?

The experience of Mr. Ernest Peterson, a building contractor at Rockford, Illinois, for fourteen years, is that the use of Long-Bell trade-marked lumber brings about a distinct saving in each one of those two items of cost.

"Most of my jobs," Mr. Peterson says, "are high grade homes of eight to fifteen rooms, running from \$5,000 to \$15,000 in value. I average ten homes a year, costing an average of \$9,000, in which only Long-Bell lumber is specified.

"My average \$9,000 home will cost about \$1,600 for carpenter labor. Figuring conservatively, I save \$130 on each house by using Long-Bell lumber, which requires a *minimum* of the sorting, re-handling and re-manufacturing on the job necessary with inferior lumber. Thus

on my ten jobs I save \$1,300 annually by eliminating  $8\frac{1}{8}\%$  of my carpenter labor."

Mr. Peterson points out the further saving to the builder by estimating longer life for the home built of Long-Bell trade-marked lumber, thereby reducing the annual item of depreciation. It is also the opinion of this experienced contractor that the home built of Long-Bell lumber will require the minimum of repairs during its entire life.

"I have never received a complaint on my work since using Long-Bell lumber," Mr. Peterson declares. "On the contrary, it is a source of pride to me to be complimented constantly by my customers on the quality and appearance of their homes. My best advertisement is to take prospective customers out to a job under construction. They never fail to notice the unusually fine quality of the lumber used.

"This year, in addition to my own use of Long-Bell lumber as standard, three jobs of Long-Bell lumber have been sold to three different people who were putting up homes, and who were impressed by the quality and appearance of my jobs."

### ★ Mr. Peterson Estimates His Savings

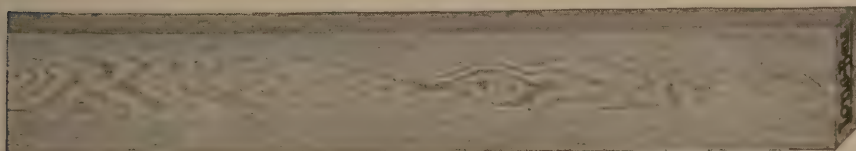
The average home that Mr. Peterson builds costs \$9,000. He estimates that the carpenter labor on that house, when built with ordinary lumber, costs him \$1,600. When he uses Long-Bell trade-marked lumber his estimate of the *saving in carpenter labor* is  $8\frac{1}{8}\%$ , or \$130, so that his carpenter labor bill is reduced to \$1,470.

The reason that makes this savings possible, he points out, is that "Long-Bell lumber requires a *minimum* of the sorting, re-handling and re-manufacturing on the job necessary with inferior lumber."

"During the last three years," declares this experienced building contractor, "the appearance and quality of my jobs have been considerably improved, due to my using Long-Bell lumber exclusively."

# Long-Bell

KNOW THE LUMBER YOU BUY



LONG-BELL LUMBER  
IS TRADE-MARKED  
ON THE END OF THE  
PIECE

★ Send for the booklet, "Experiences In Home Building," containing the full statements of Mr. Peterson and four other contractors.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

**THE LONG-BELL LUMBER COMPANY**  
 609 R. A. LONG BLDG. KANSAS CITY, MO.  
*Lumberman Since 1875*





Two of the many Kernerator-equipped residences erected by Mr. Warren E. Richards at Rose Hill, Cincinnati, Ohio.

### "Standard Practice" in Cincinnati!

WHEN Mr. Warren E. Richards, active realtor and president of the Cincinnati Real Estate Board, endorses a unit of building equipment, it must satisfy one, or all of these demands:

- make easier sales
- make easier rentals
- reduce tenant turnover
- reduce building upkeep

The Kernerator is "standard practice" in Mr. Richards building operations. For this time-tried, built-in-the-chimney incinerator, disposes of *all* waste where it originates, *without a cent* of upkeep cost.

As the cut-away illustration shows, all waste is dropped into handy hopper doors, located on upper floors. Falling to the brick combustion chamber, all combustibles are consumed, while non-combustibles, flame-sterilized are removed with the ashes. No fuel is ever required—the air-dried waste lights easily, and burns itself.

For additional details see Sweet's (1923) Pages 2340-41, or write—

KERNER INCINERATOR COMPANY  
1015 CHESTNUT STREET MILWAUKEE, WIS.

## KERNERATOR

Built-in-the-Chimney

REG. U. S. PATENT OFFICE

Drop all  
waste here



—then  
FORGET it!

## BETZCO COMBINATION BROOM and IRONING BOARD CABINET

(Built-in Type)

One of the units now employed extensively by architects for interior fittings. Each finished coat of enamel is oven-baked. High-class in every particular.

Dimensions: Height, 65 inches; width, 14 inches; depth, 5 inches. Regular 1½-inch front trim, making outside dimensions 68x17 inches. One-inch return wall on all sides. One steel shelf 6 inches from top. Wood ironing board complete with bracket. Standard double wall door, with nickel plated hinges. Equipped with standard locking device.



Clip this coupon for  
more information

FRANK S. BETZ COMPANY  
HAMMOND, IND.  
CHICAGO NEW YORK

Name .....  
Occupation .....  
Address .....  
City..... State.....

## Kewaunee

LABORATORY FURNITURE



LET Kewaunee help make the new School a credit to the community. We have been designing and manufacturing Laboratory Furniture for Schools, Hospitals, Manufacturing Plants, etc., for a generation.

In many cases, however, you will find special equipment unnecessary, as our line contains over 500 designs, some one of which may answer satisfactorily your particular needs.

Ask for a copy of the Kewaunee Book.

We are in a position to make immediate delivery on all of our standardized desks and tables.

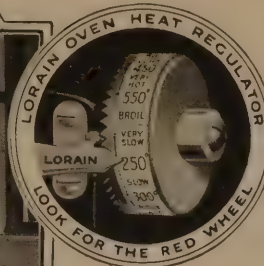
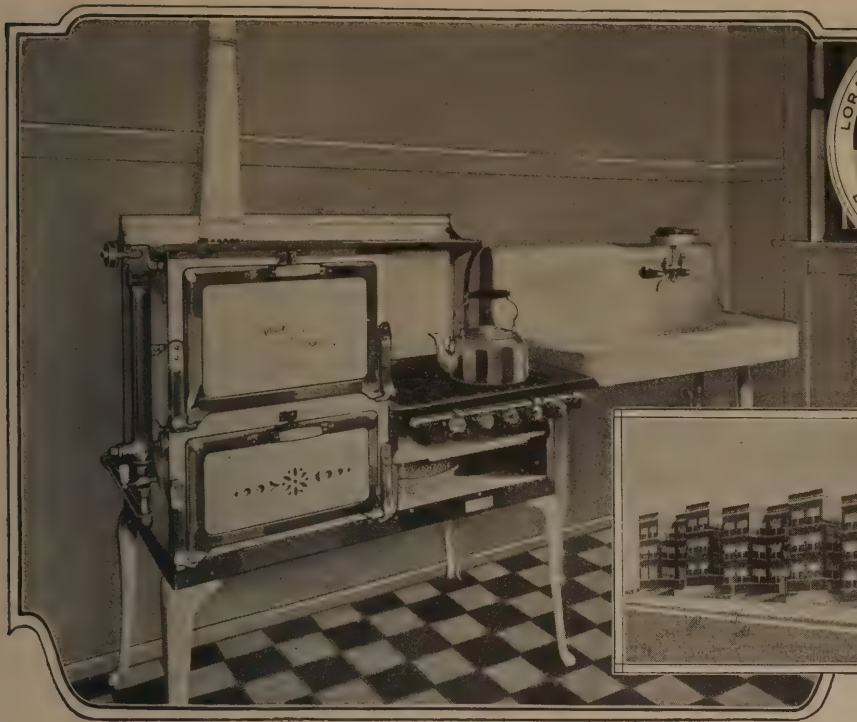
Address all inquiries to the factory at Kewaunee

## Kewaunee Mfg. Co.

LABORATORY FURNITURE EXPERTS

C. G. CAMPBELL, Treas. and Gen. Mgr.  
New York Office 141 Lincoln Street  
70 Fifth Avenue Kewaunee, Wis.  
Offices in Principal Cities





*One easy turn of the Lorain Red Wheel gives you a choice of 44 measured and controlled oven heats for any kind of oven cooking or baking.*

(Below) Apartment building at 6300-18 Southwood Ave., Clayton, Mo. Agatstein Bros., St. Louis, Mo., Owners; Harrison Construction Co., St. Louis, Mo., Architects and Contractors. Kitchens throughout are equipped with Quick Meal Gas Ranges with Lorain Oven Heat Regulators. View at left shows type of stove as installed in representative kitchen of these apartments.



## Make It Easy for Your Clients to Have Satisfied Tenants

**W**HETHER you are building single houses or apartment buildings, your clients' ideal is "satisfied tenants". Satisfied tenants remain month-in and month-out, and every investment-builder knows what this means to him in actual dollars and cents.

For instance, once a woman has lived in an apartment that has a gas range equipped with a Lorain Oven Heat Regulator, she *knows* Lorain Service and will hesitate over renting another apartment that does not have such a range. Every day is "moving day" for a certain proportion of the population. Hence in the case of apartments especially, Lorain-equipped Kitchens each year are becoming more of a factor in the retention of tenants. They help to make "satisfied tenants".

Where the housewife has a gas range with the Lorain Self-regulating Oven she can

place an entire meal (meat, vegetables and dessert) in the oven, absent herself from home for several hours—and within a few minutes after her return, place a deliciously cooked meal upon the table.

Lorain also makes possible the Canning of fruits and tomatoes in the oven as well as Baking, Broiling and Roasting without ever a failure—and all accomplished without attention of any kind during the cooking process.

Thousands upon thousands of fine homes, apartments, churches, hospitals and other types of structures have kitchens furnished with Lorain.

These famous stoves are used for cookery instruction purposes in over a thousand schools and universities. For specific data see pages 2315-24 inclusive, 18th Edition Sweet's Architectural Catalog. Catalogs, prices etc. gladly furnished on request.



These famous gas stoves are equipped with the Lorain Oven Heat Regulator:  
Dangler, Direct Action, New Process, Quick Meal, Reliable and Clark Jewel.

AMERICAN STOVE COMPANY, 444 Chouteau Ave., St. Louis, Mo.  
*Largest Makers of Gas Ranges in the World*

# LORAIN OVEN HEAT REGULATOR





*The Fraternity Clubs Building, New York City.  
Murgatroyd & Ogden, Architects.  
Under the management of the Allerton Co.*

## PFAUDLER GLASS LINED LAUNDRY CHUTES IN BOTH NEW YORK AND CHICAGO ALLERTON FRATERNITY CLUBS

The best hotel, apartment hotel, and fraternity-club construction calls for the installation of the Pfaudler Glass Lined Laundry Chute. It keeps unsightly, soiled linen out of sight of the guest, and provides for immediate disposal. There are no laundry carts to clutter your corridors.

You can check your laundry more carefully by the Pfaudler Chute System and thus make a considerable saving.

Furthermore, when you install the Pfaudler chute, you are equipping your building with the most sanitary and durable device on the market for handling laundry. The chute can be thoroughly flushed out by a flushing ring at the top. Being made of steel (glass lined) it carries no up-keep or replacement charges. It is the ideal chute for your new building.

*Send for illustrated brochure  
"A Laundry Chute That Is Glass Lined"*

### THE PFAUDLER COMPANY

*The World's Largest Makers of Glass Lined Steel Equipment*

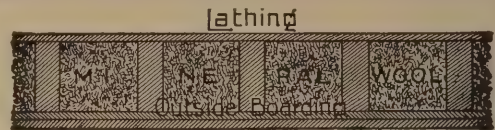


**Rochester, N. Y.**

Branches in Main Centers

Factories at:

Rochester, N. Y. and Elyria, Ohio



Section of Outside Wall of House, Showing Wool  
Between Studding

## Mineral Wool for Building

Mineral Wool has superseded all other materials used for similar building purposes because it does "a great work at little expense." A house lined with Mineral Wool has an indestructible, fire-proof and vermin-proof guard; it protects the entire household. In the winter time it keeps the cold air out, facilitating proper heating and economy in fuel. In the summer it keeps the heat out.

This material, being of fibrous, inelastic composition, acts as a deadener and muffles all sound. It is considered the best insulator material on the market, making it a perfect refrigerating machine.

Mineral Wool makes life-long friends of all its users. If you are skeptical as to its power, let us demonstrate. We can prove all claims. Write us today.

### U. S. MINERAL WOOL CO.

280 Madison Avenue, New York



Section of Sound-Proof and Fire-Proof Partition



### One Room Into Many, Many Into One

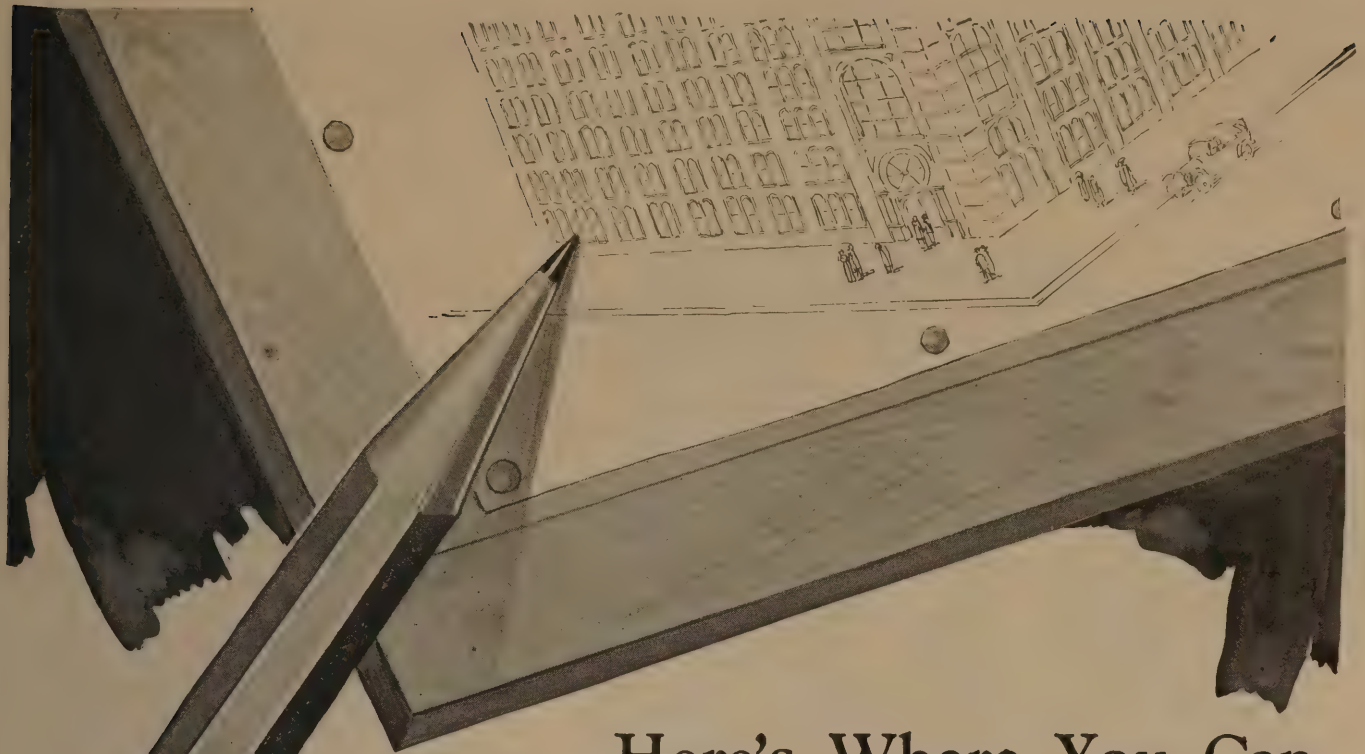
WILSON Sectionfold Partitions transform, easily and quickly, one room into many or many into one. Made to harmonize with any interior. Fold back compactly out of the way when not in use; adaptable to old buildings as well as new.

Send for Catalog No. 3

The J. G. WILSON Corporation  
11 East 36th Street, New York City  
Offices in all principal cities







## Here's Where You Can Save Him Money

**W**HEN you plan a hotel, restaurant, cafeteria or club kitchen, there's one proven way of saving money, (60% in dish breakage; 50% in pay-rolls) guaranteeing efficiency and insuring satisfaction. Use Autosan Dishwashing Equipment.

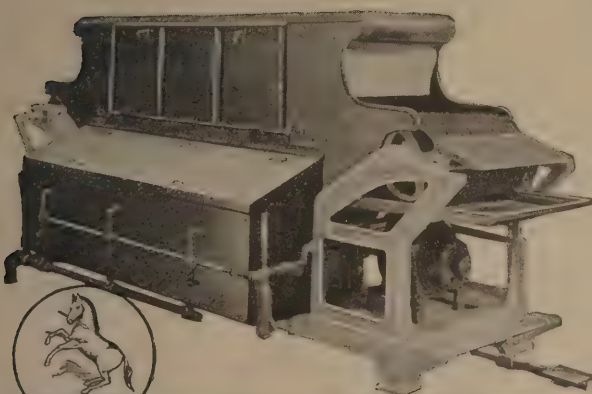
Autosan economizes in floor space as well as in labor, water and electricity. It washes dishes scientifically and more thoroughly than any other known device. Built of bronze, copper and brass throughout, long life and better service are assured.

Efficiency and profitable management call for modern methods. When you decide on The Autosan in planning kitchen space, you are rendering a service to your client that will pay you many dividends in lasting satisfaction. Made in models to suit practically every need, Autosans are proving their worth in leading hotels, restaurants and clubs throughout the country.

We have prepared a special Autosan Folder for Architects. May we send you a copy?  
Ask for Folder W-123

Colt's Patent Fire Arms Mfg. Co.  
Hartford, Conn., U. S. A.

A-S-123



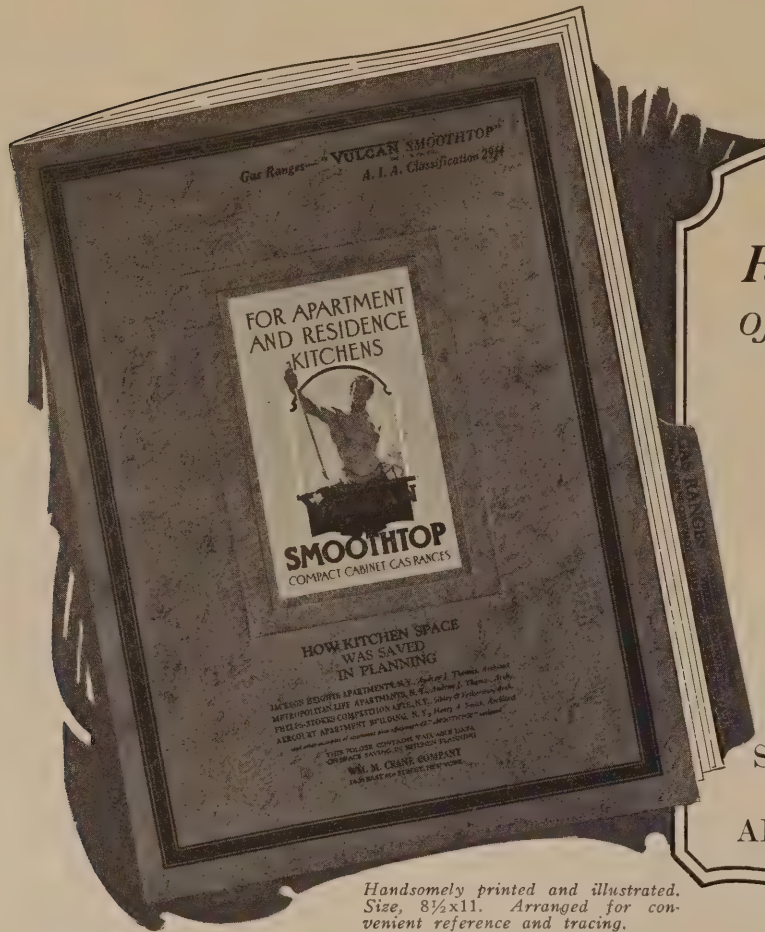
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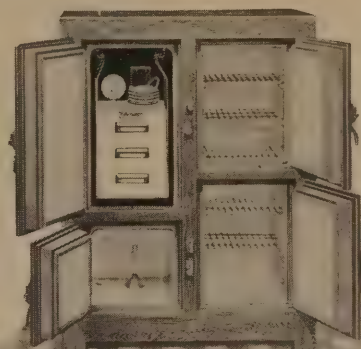
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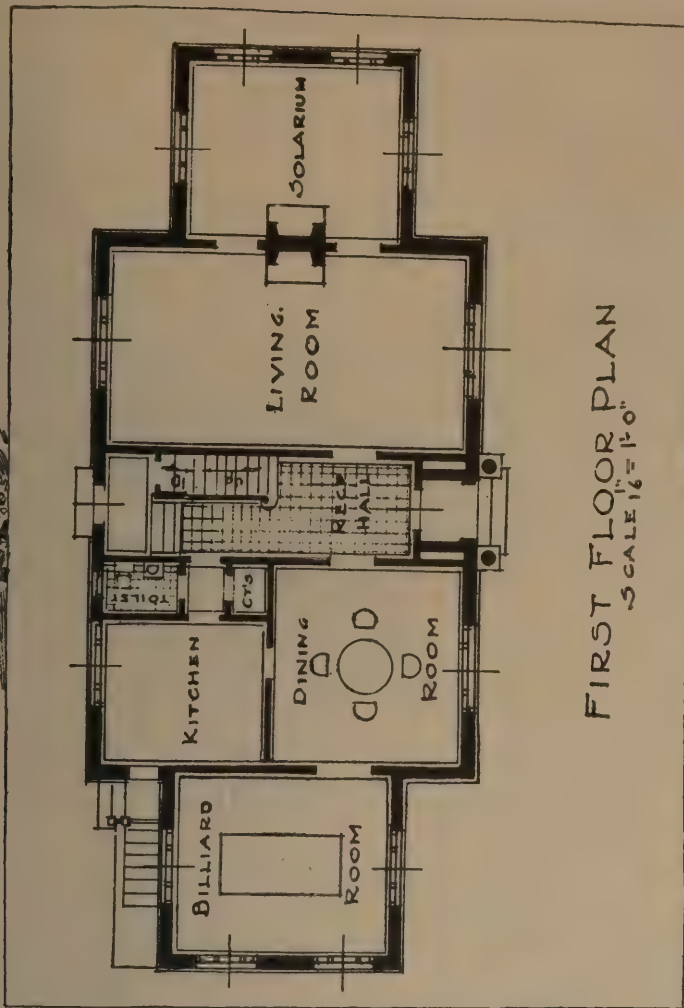
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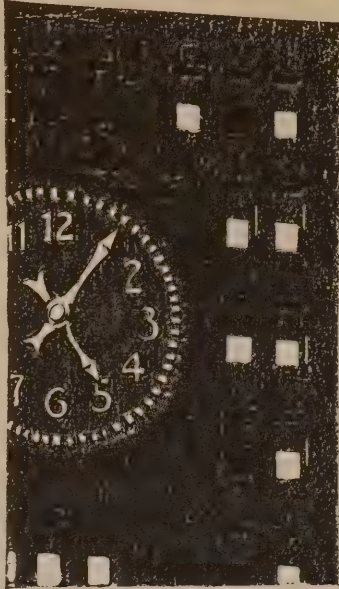
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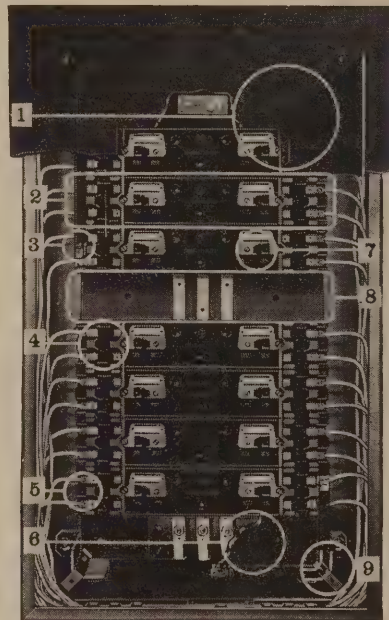
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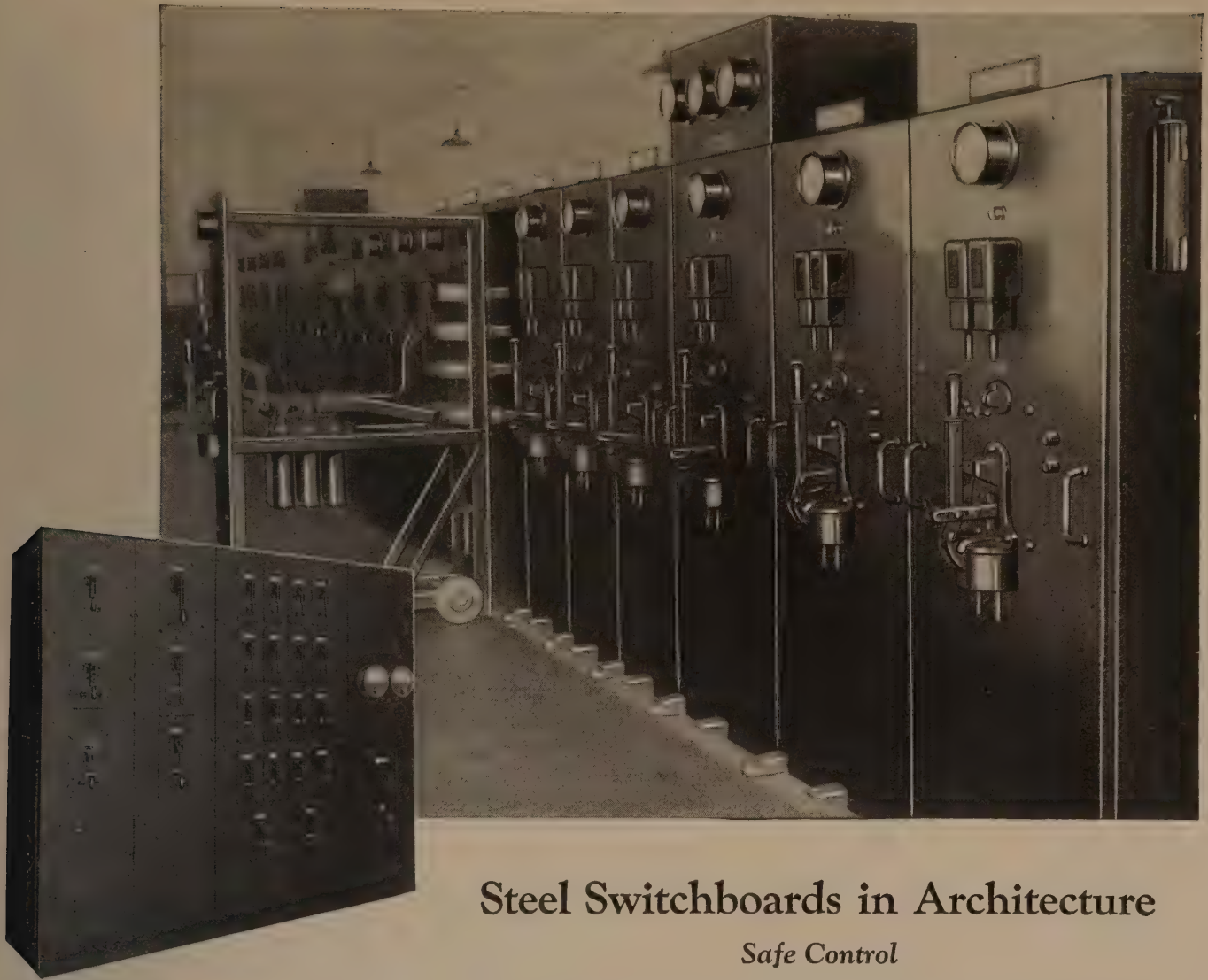


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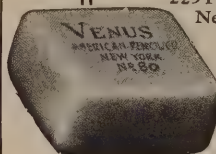
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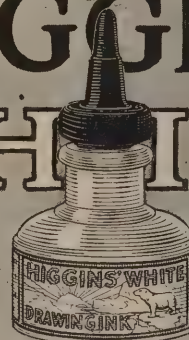
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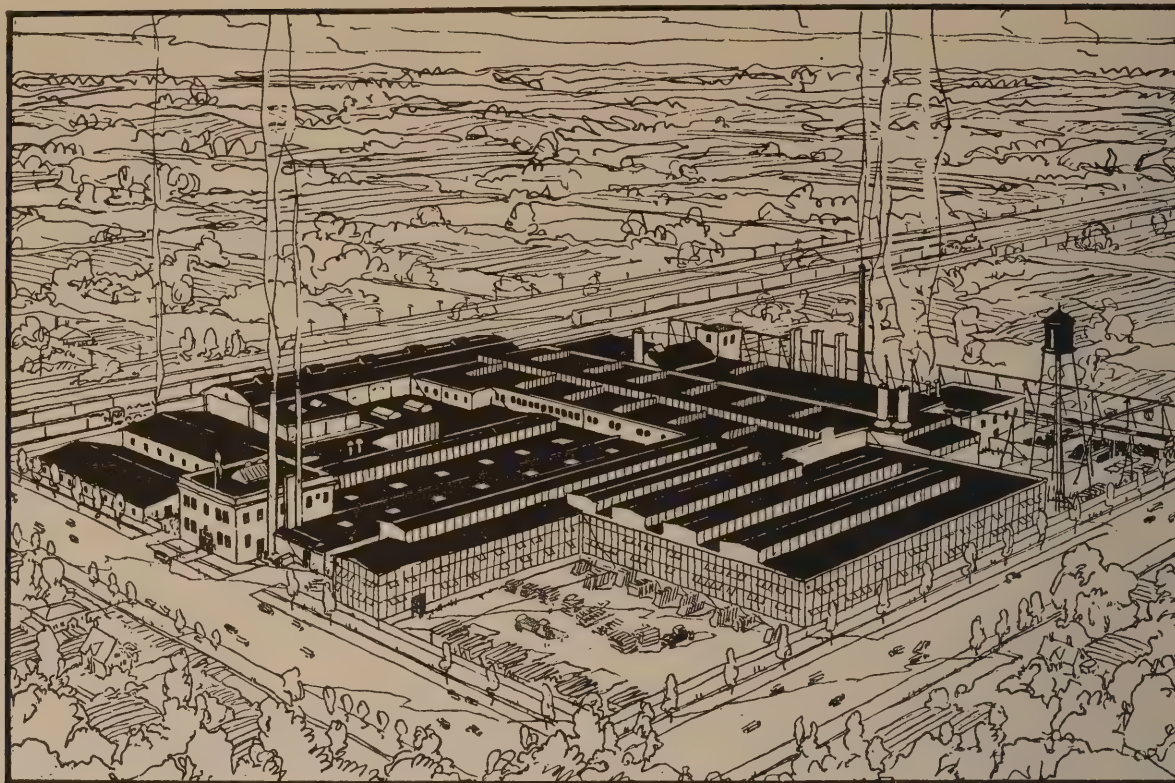
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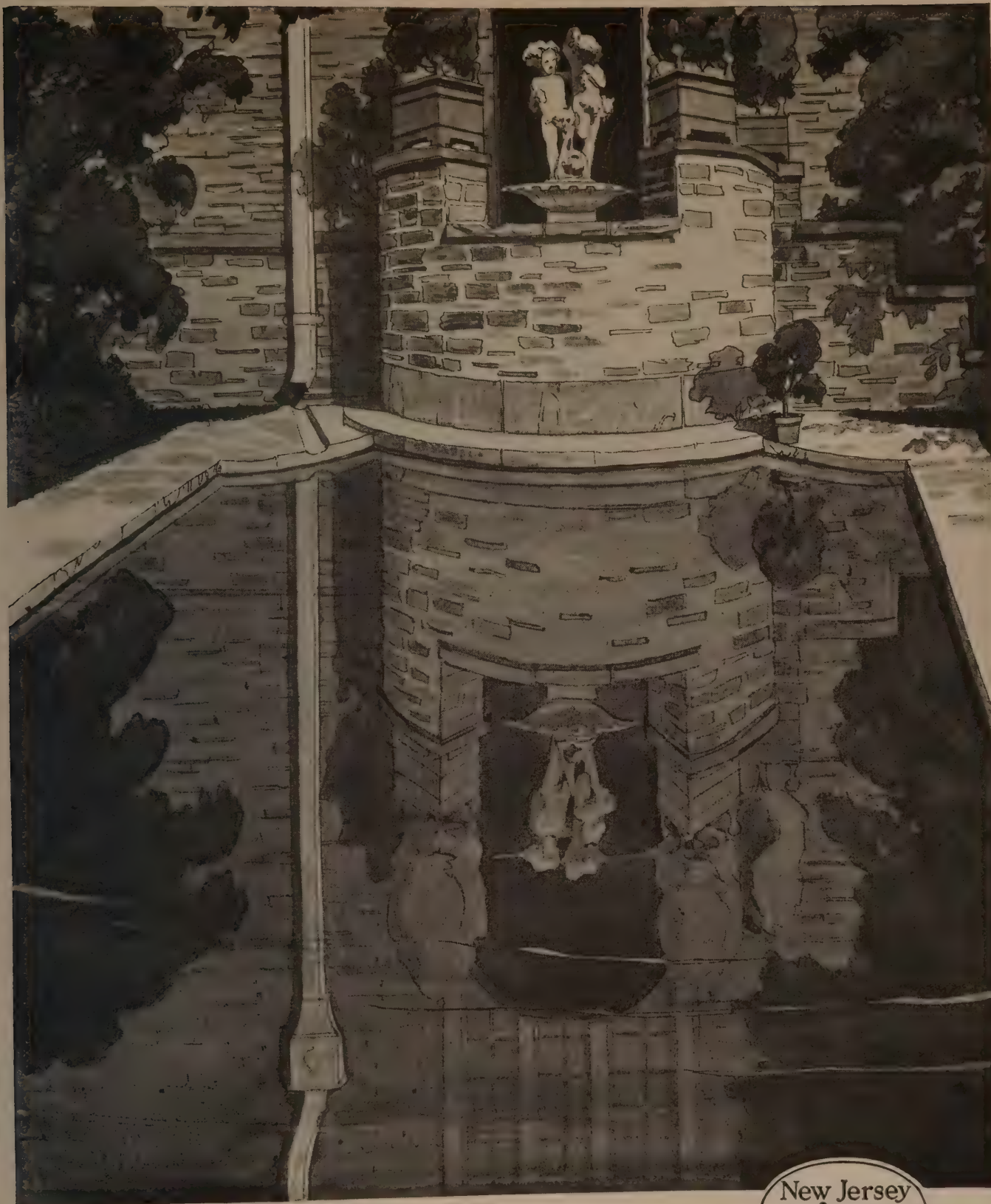
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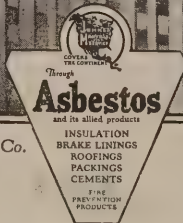
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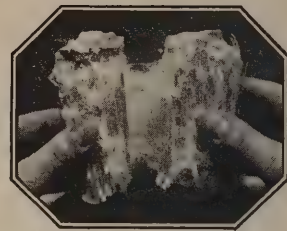




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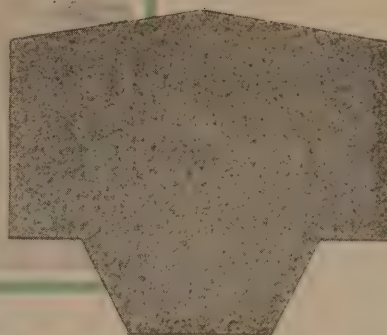
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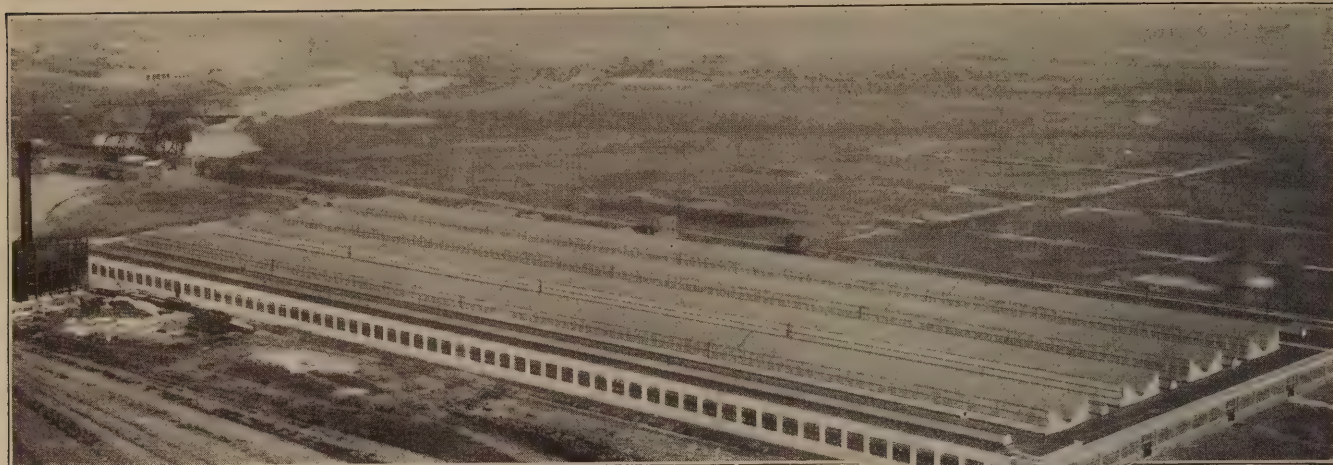
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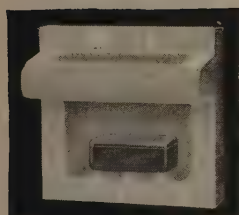
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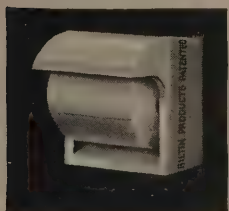
**GARFORD**



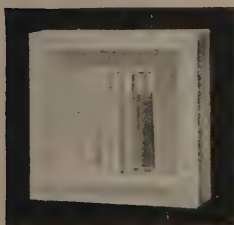
## Genuine Fairfacts Fixtures bear this label



*Soap Holder with  
Safety Wall Grip*



*Paper Holder*



*Tumbler Holder*

A FEW years ago bathroom fixtures installed in the walls were a novelty. Today it is the custom of architects to recommend them in almost every house, hotel or apartment they build.

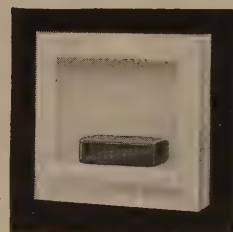
Fairfacts Fixtures are the outstanding leader in their line. The public knows fixtures of this type only as "Fairfacts Fixtures." That is what is popularly called "Consumer acceptance." But the fact that Fairfacts Fixtures are made of snow-white china, the only material that will retain its fresh, clean appearance will mean more than "Consumer acceptance." It means a client's satisfaction through the years to come.

That is why every genuine Fairfacts Fixture bears a red and yellow label, pasted on each fixture. These labels are for the protection of those who want these superlative fixtures.

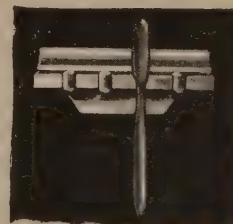
Fairfacts Fixtures are installed by tile contractors—the only trade that does this work and should be included in the tile contract. Send for catalog F. Details and specifications also appear in Sweet's Architectural Catalog.

THE FAIRFACTS COMPANY, Inc.  
Manufacturers

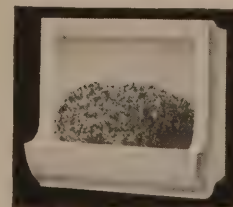
Dept. F 234-236 West 14th Street New York City



*Soap Holder*



*Tooth Brush Holder*



*Sponge Holder*

Look for this



trademark

# Fairfacts Fixtures





# Black and Galvanized SHEETS and Roofing Tin Plates

Highest quality Roofing Plates produced—made from Keystone Copper Steel, grades up to 40 pounds coating—fireproof, durable, economical, satisfactory.



The destructive enemy of sheet metal is *rust*. It is a well established fact that an alloy of copper gives to Steel Sheets and Tin Plates the maximum of *rust-resistance*. Keystone Copper Steel is unequaled for roofing, siding, spouting, gutters, culverts, metal lath and similar uses. It assures roofs and sheet metal work that will withstand the ravages of fire, wear and weather. Shall we send proofs from actual service tests? We manufacture Steel Sheets

and Tin Plates for all purposes and specially adapted to the requirements of architects and contractors: Black Sheets, Special Sheets, Apollo and Apollo-Keystone Galvanized Sheets, Corrugated Sheets, Formed Roofing and Siding Products, Roofing Tin Plates, Bright Tin Plate, Black Plate, Etc. Sold by leading metal merchants. Our products represent the highest standards of quality and utility. Write nearest Sales Office for quotations and *Testimony* booklet.



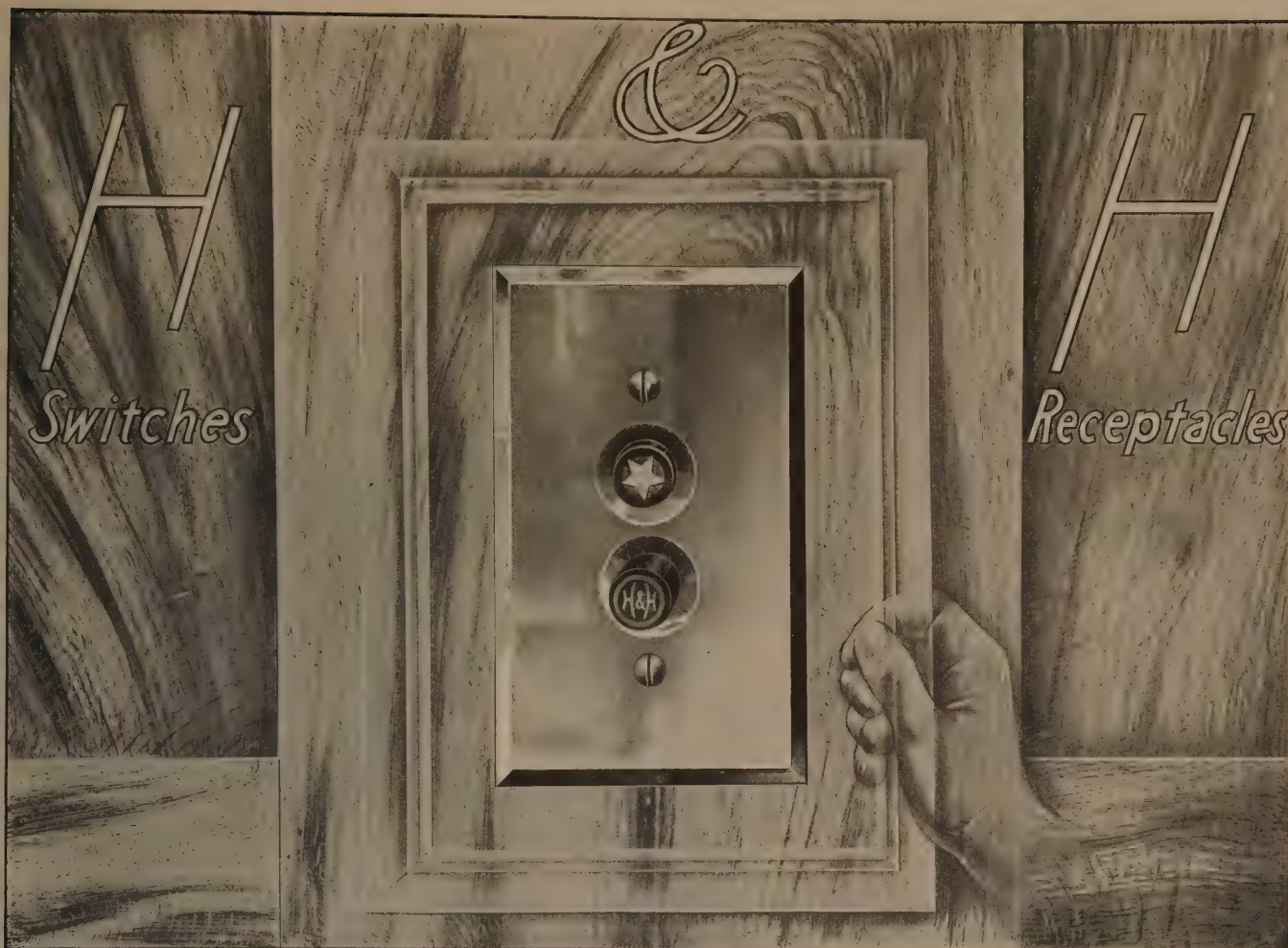
## American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

DISTRICT SALES OFFICES:

Chicago   Cincinnati   Denver   Detroit   New Orleans   New York   Philadelphia   Pittsburgh   St. Louis

Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, New York City  
Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, San Francisco, Los Angeles, Portland, Seattle



## GOLD STAR SWITCH —part of the picture

Part of the detail of rich interiors is the *gold star* of the architect's standard—in a Push Switch.

Beautifully paneled walls give a fitting backing to this high-spot of the electrical work. And the switch in turn gives the staunchest backing to the architect's eye for service.

In looks *and* in touch, GOLD STAR goes with elegance and fine artisanship. Only the costly edifice calls for it, but that sort of building in all propriety *must have it*.

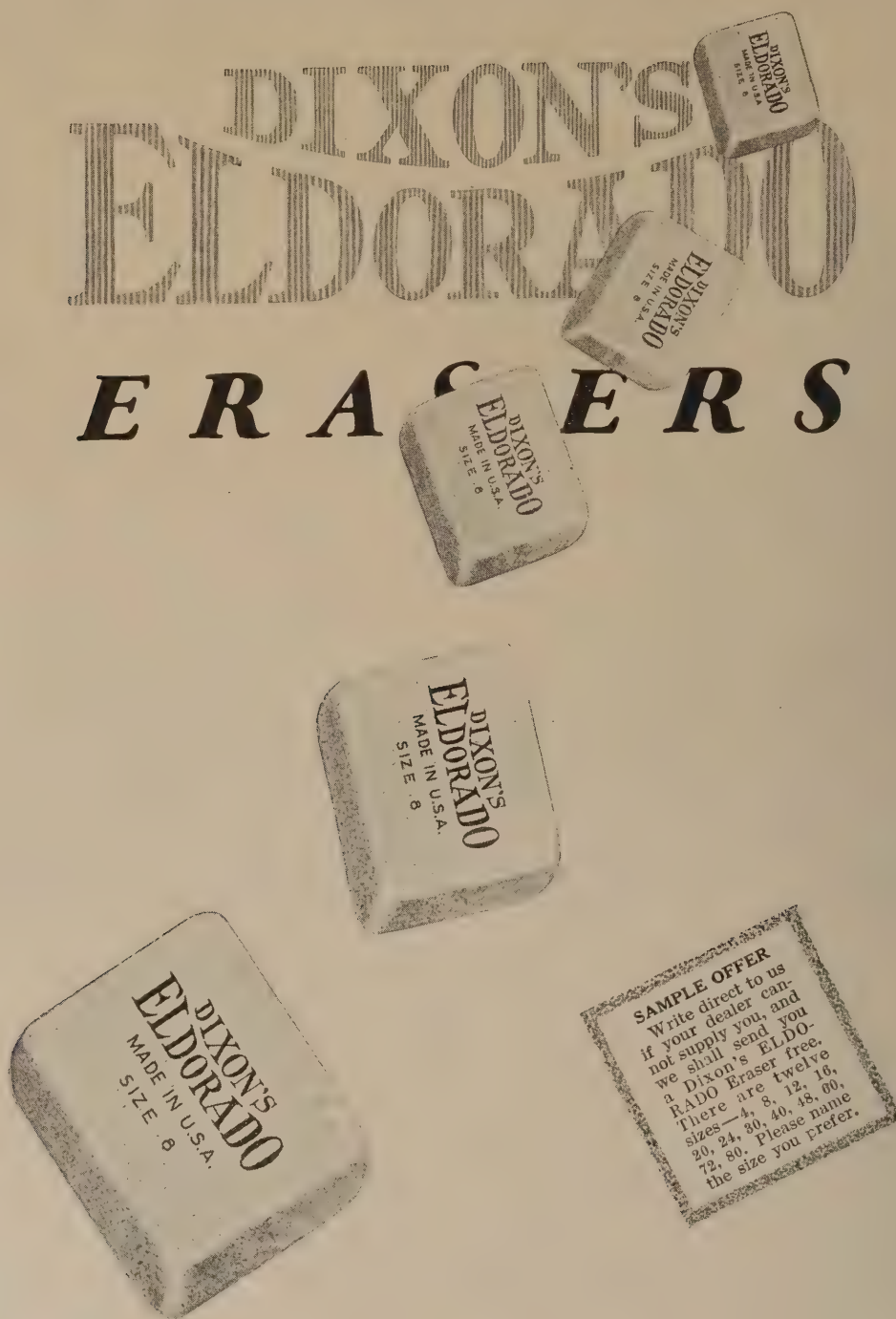
Developed for the *de luxe* work, GOLD STAR serves but the one class of construction. For medium-price work, you have H&H "Old Reliable," and for competitive-price work you have "Nutmeg"—both of push-button type.

Tumbler Switches have their place and popularity, too; they're listed in shallow and standard-depth base in the H&H Catalogue, along with the push switches. If you haven't the catalogue, please tell us—and accept a sample of the Gold Star Switch for your courtesy.

THE HART & HEGEMAN MFG. CO. HARTFORD, CONN.







## A SPECIAL ERASER —for artists and draftsmen

SOFT—PLIABLE—yet firm enough to do the job without crumbling into aggravating little bits.

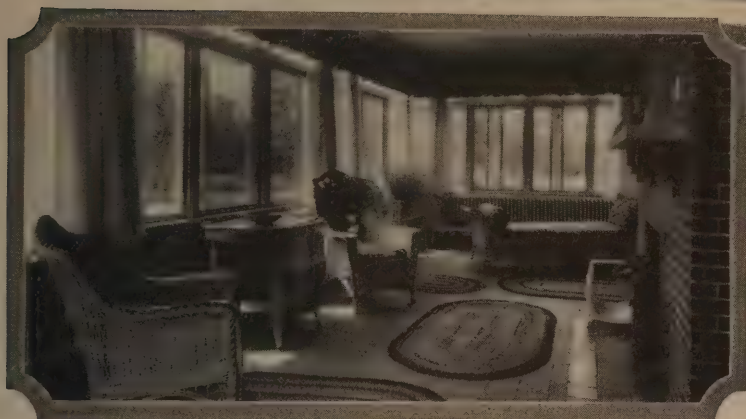
Keeps its softness indefinitely. Doesn't absorb dirt. Absolutely free from grit. When you try it, you'll say it's a mighty fine eraser—a worthy partner of Dixon's ELDORADO pencil—the kind of eraser that will be especially appreciated by artists and draftsmen.

JOSEPH DIXON CRUCIBLE Co., Pencil Dept. 224-J, Jersey City, N. J.  
Canadian Distributors: A. R. MacDougall & Co., Limited, Toronto

# HIGGIN

## ALL METAL

### WINDOW SCREENS



*Residence of Lewis W. Kenny,  
Lynnfield, Mass.  
Charles Vernon, Lynn, Mass.,  
Architect  
Equipped with Higgin All-Metal  
Window Screens*

## A suggestion on window detail—

Proper treatment of window detail so affects architectural style that it is not surprising that the architect is highly critical of the window screens to be installed.

That he insists on Higgin All-Metal Screens in his specifications is simply thoughtful protection of the ultimate beauty of the completed building. The narrow enameled metal frames are entirely unobtrusive whether viewed from within or without. They do not interfere with the subtle effects of high light and shadow the architect strives to hold in his exterior detail.

And particularly in the solarium, heavy wooden screens are out of place. Note the sense of airy openness in the solarium interior above—an example of Higgin Screening.

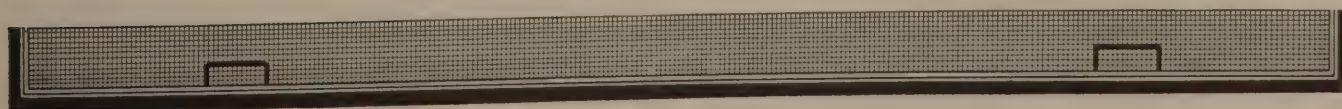
A Higgin service man will come to your office at your call and discuss with you how Higgin fitters and Higgin co-operation can assist you by improving the screening of the homes and buildings you are now erecting.



*The* **HIGGIN** *Mfg. Co.*  
*Newport, Ky.*  
*Toronto, Canada.*

*Manufacturers of Higgin All-Metal Weatherstrips and Higgin All-Metal Screens*

Look in your telephone or city directory for the address of your local Higgin Service Office, or write to the home office direct.





# New York City Public Schools install AMERICAN SASH CHAIN



Here is pictured one of the many New York City Public Schools for which American Sash Chain was specified.

American Sash Chain, in its five different sizes, for varying weights of sash, is adaptable to all classes of building.

See Sweet's Architectural Catalog Page 1089

## AMERICAN CHAIN COMPANY

BRIDGEPORT Incorporated CONNECTICUT  
In Canada:

Dominion Chain Co., Ltd., Niagara Falls, Ontario  
District Sales Offices: Boston, Chicago, New York, Philadelphia,  
Pittsburgh, San Francisco.

Largest Manufacturers of Welded and Weldless  
Chains and Makers of the famous WEED Auto-  
mobile Accessories



## The Screen Cloth of Long Life—

**N**OT that made of iron or steel wire—(even if metal-coated or painted)—which is soon destroyed by rust—

**Not** that made of bronze or brass wire—which often wears unevenly—some strands going before others—

**Not** that made of ordinary copper wire—some of which is not pure, and some of which is so soft that the cloth bulges and stretches—

**But it is Jersey Copper Insect Screen Cloth.**

The wire used in Jersey is Copper 99.8% pure, made by a special Roebling process, which gives it stiffness and strength comparable to that of steel. It is the only copper cloth made of this special wire. No stretching, no rusting out in patches, no weak strands—*just long service.*

We will gladly send you samples which you may test for yourself. No annoying sales efforts will follow.

THE NEW JERSEY WIRE CLOTH COMPANY

638 South Broad Street

Trenton

New Jersey

TRADE **JERSEY** MARK

## Copper Screen Cloth

Made of Copper 99.8% Pure

## THE SASH CHAINS

Made  
in  
"Giant  
Metal"  
"Red  
Metal" and  
Steel.

Sash Chain  
Catalog A-1  
sent on request.  
See Page 1253,  
Sweet's Catalog,  
18th Edition.

The Woolworth Bldg.,  
New York City, the tall-  
est building of today, con-  
tains over 50,000 feet of  
our No. 1 "Giant Metal"  
Sash Chain. This chain was  
installed in 1911 and is giving  
the best of service and satisfaction.

We have just furnished the  
Campbell Metal Window Co.,  
of Baltimore, Maryland,  
42,000 feet of our No. A  
"Giant Metal" Sash Chain  
for use in their metal  
windows.

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Buhl Bldg., and  
Hudson Bldg.,  
Detroit, Mich.,  
Smith, Hinch-  
man & Grylls,  
Architects,  
Detroit,  
Mich.

Why Not Use the Best?

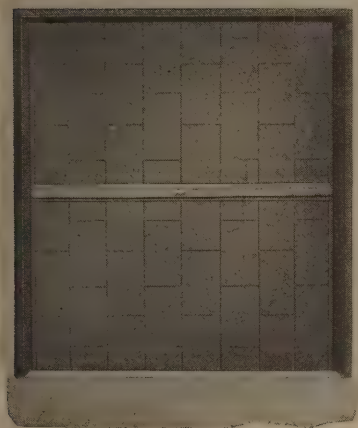
BRIDGEPORT, CONN.

**THE SMITH & EGGE MFG. COMPANY**





*Continental Can Company  
Jersey City, N. J.  
Engineers and Architects:  
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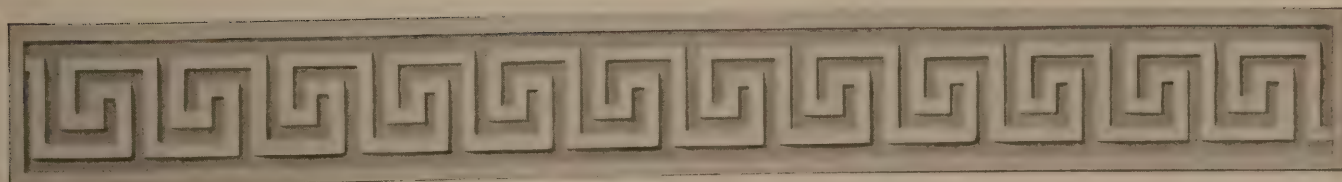
## “Repeat PEELLE Doors”

THROUGHOUT the country, in buildings representing every phase of industrial and business activity, PEELLE Freight Elevator Doors are efficiently performing their duty. While this is convincing testimony, there is additional evidence of PEELLE merit. It is demonstrated by continuous “repeat” specifications for PEELLE Doors in buildings that are enlarged and require additional elevator enclosures.

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**PEELLE** Freight **DOORS**  
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## Hoffman Casements

Are top supported folding windows with allowance for expansion to prevent binding; not hinged to either jamb; no leaking or rattling, ventilation without a direct draft, all cleaning done from inside, no weatherstrips required, suitable for any building.

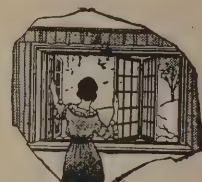


Pages 1394-99, 18th Edition.

Portfolio of Detailed Drawings mailed to architects upon request—Filing size

## Andrew Hoffman Mfg. Co. Hoffman Casement Window

900 Steger Building  
Chicago



Write for illustrated booklet of interest to home builders.

## Our Experience of Fifteen Years is Expressed in DEFINITE STRUCTURAL ADVANTAGES

### F O R E X A M P L E

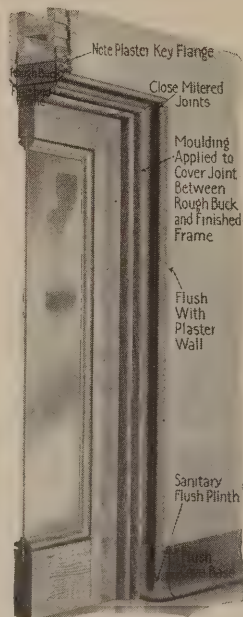
#### KNAPP FLUSH METAL CASING

There is no substitute for long labor in the laboratories of Experience. Time is the one demand of "The Great Teacher." But in return, Knapp Brothers have received a full measure of reward—that no one can duplicate because no one has duplicated the experience.

And the most valuable of the facts that the years teach are those that point out new methods—and these are patentable.

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In every slightest element of the design of Knapp Sanitary Metal Trim, there is an advantage that will be felt in the construction of the building or in its use as time goes on and wear and tear apply themselves to the structure.



**E**VEN a casual scrutiny of the details in the accompanying cross-sectioned door casing will impress every architect or builder with its structural soundness. This fact—resulting in a permanently squared opening that insures free swinging and latching doors, combined with durability which its metal composition affords, and with the handsomeness of its appearance—has promoted its selection for many fine buildings of various kinds. Knapp Flush Metal Casing is especially preferred for public buildings, hotels, hospitals and schools.

We will be pleased to send complete information on request.

Knapp Metal Casing allows door, window, vent grille, recessed cabinet or interior borrowed partition lights to be trimmed flush with the plastered surface, a method being more generally used than ever before due to the low cost, simplicity of detail, sanitary considerations and low upkeep.

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FLUSH DOOR CASING  
CONCEALED  
PICTURE MOULD  
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BULL NOSE METAL  
CORNER PROTECTOR  
FLUSH CHAIR AND  
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With highest utility, and fine appearance, the Crittall Reversible window also offers a quality advantage at minimum cost that cannot fail to impress architects and builders.

It combines maximum light with a wide, easily adjusted ventilating range. It is ideal for offices, never out of order, and its reversibility permits windows to be washed from inside.

The services of our engineers are gladly placed at the disposal of architects for assistance in the solution of unusual window problems.

*All Crittall Casements and Windows are made of Crittalloid—the Copper Bearing Steel*

**CRITTALL CASEMENT WINDOW CO., Manufacturers, DETROIT**



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Dahlstrom prestige has been built on honest and persistent efforts to achieve those distinctive results. Let us cooperate with your architect to the end that Dahlstrom Complete Inclosures be specified and used in your new hotel.

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Architects

## DAHLSTROM METALLIC DOOR COMPANY

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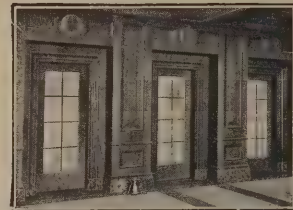
Jamestown, New York

NEW YORK  
25 Broadway

DETROIT  
1331 Dime Bank Bldg.

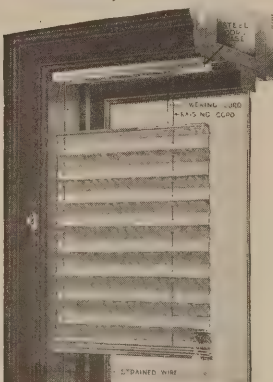
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## *Athey Perennial* Window Shades

They fold like a fan. Can be raised from the bottom, or lowered from the top. No rattle or fluttering even when the wind blows hard. No springs or rollers to get out of order. No latches to slip, or stick.



Truly decorative—extremely durable. Made of indestructible cloth—thoroughly shrunken and waterproofed. Rain won't hurt them. Easily dry-cleaned. *By far the most economical shade you can buy considering the many years they last.* Experience of thousands of users prove it.

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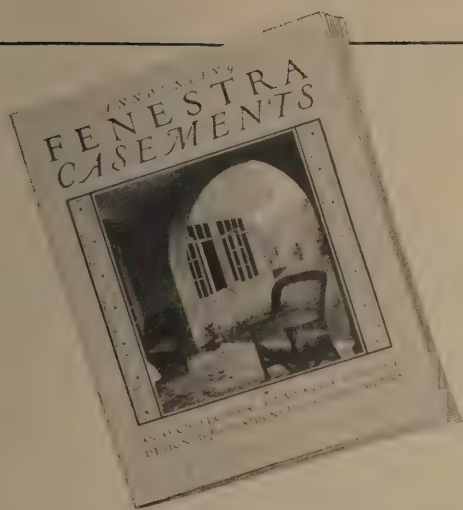
## English Type



# FENESTRA

## CASEMENTS

For Homes and Apartments



This new Fenestra Casement Book is just off the press. It contains practical descriptions, illustrations of this new Fenestra product, together with complete installation details, stock and standard types, sizes, etc. We will be glad to send you a copy free upon request.

THE charm and dignity of steel casements is acknowledged everywhere, and Fenestra Casements combine the beauty of the English design with many practical advantages which make them ideal for use in the finest American homes and apartment houses.

Fenestra Casement Sections are especially designed—bars narrow and attractive yet sturdy. The casement leaves swing outward and are designed with exceptional care to insure rigidity. Weather protection is assured by wide, flat, two point contact all around the opening.

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Division of Architectural Construction



## "An Ounce of Prevention"

FOR THE DRAUGHTING ROOM AND  
SPECIFICATION WRITER

### *When detailing and specifying VENEERED DOORS*

1. **Avoid detailing doors flush one side and panelled the other or flush one side and sunk mirror the other side.** The difference in glue surface results in unequal tension, causing warping.

2. **Avoid specifying doors veneered with soft wood one side and hard wood the other** or any considerable difference in porosity or texture. Such combinations always result in a tendency to warp on account of the unequal absorption of glue. This applies likewise to double thick or three ply exterior doors where the danger of warping is still greater. For example: never combine Pine and Oak. Avoid combining Oak or Mahogany with Birch or Gum. The former are porous, the latter close-grained. It is always safer to specify the same kind of wood on both sides of door.

3. **Avoid detailing a great variety of mouldings** for a small number of doors, thus adding materially to the cost without perceptibly changing the appearance.

4. **Avoid detailing muntins for divided lights that are not practical to mitre or cope at the joints.**

5. **Avoid detailing nailed-in mouldings wider than 1½ inches.** Wider moulding tends to curl or lift at the edges but this curling is often not apparent until after the work has been in place for some time.

6. **Avoid detailing solid stuck moulding or moulding run on the solid wider than is practical.** In general, for 1¾ inch doors, this width should be not greater than ⅞ inch and for 1¾ inch doors not greater than ¾ inch. Greater widths cannot be successfully coped.

7. **Avoid detailing a door combining both glass and panels with solid stuck moulding unless** the solid stuck moulding profile, width and depth are the same at both glass openings and panels, with one side at the glass rabbeted to receive glass and fitted with loose stops of a width to take up the difference in the thickness of glass and panels.

8. **Avoid specifying veneers that are not commercial articles.** This applies both to the kind of wood and thickness of cut and affects both the cost of the work and the service the manufacturer is able to give.

9. **Avoid incomplete details** which are the most frequent cause of delay in manufacture and jeopardize the quality of the work because it is done under pressure of time.

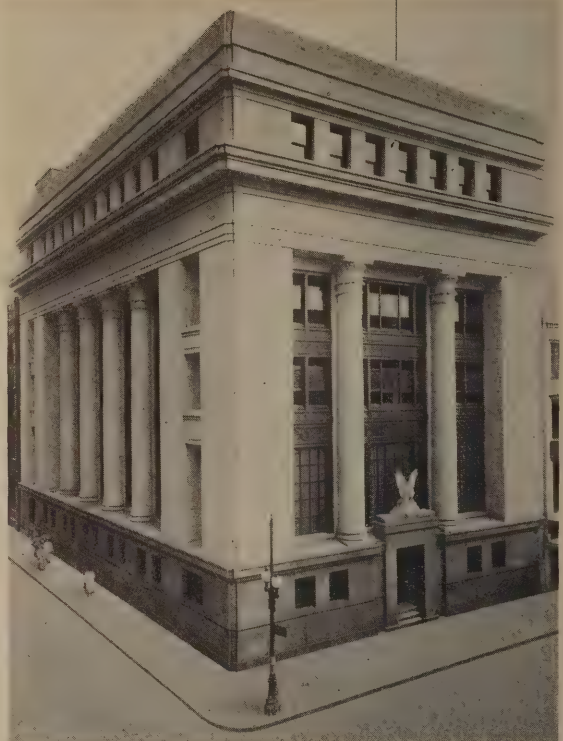
10. **Avoid eleventh hour placing of veneered door contracts.** All veneered work must have ample time for seasoning of the glue joints between each of the various glueing operations. The architect can safeguard his work by making sure that sufficient time be allowed for manufacture.

THE COMPOUND & PYRONO  
DOOR COMPANY

St. Joseph - - - Michigan

*Oldest Makers of Special Order Veneered Doors  
in the United States*

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WHEN Rathbone De Buys of New Orleans, La., designed the New Orleans Branch of the Federal Reserve Bank of Atlanta, International Casements were selected because of their perfect workmanship and design, sturdiness in construction and serviceability for all time.

Architects are leaning more and more to International Casements as they become more familiar with their advantages.

*Also manufacturers of  
International Austral Steel Windows*

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**F**AR below the street level—little thought of by the passer-by, lie the basements, sub-basements and foundations of this hotel—the new Statler of Buffalo.

All this productive space, below grade, must be not only waterproof, but dampproof. GF Integral Waterproofing Paste (GF 10) was chosen for this purpose, because it makes concrete dense and permanently impervious to moisture.

Everywhere the wisdom of waterproofing, rather than facing a constant problem of substructural dampness or leakage, is being recognized. And everywhere, from cottage to great hotel, you will find GF Waterproofing materials used in wide variety.

*A copy of the New GF "Waterproofing Handbook" is ready for you. May we send it?*

### A Few GF Waterproofing Products

- GF Integral Waterproofing Paste (GF 10)—Mixed with the gauging water to waterproof mass concrete.
- GF Membrane Materials—For walls and surfaces under hydrostatic pressure.
- GF Transparent Waterproofing (GF 100)—A brush coating for waterproofing concrete, stucco and masonry surfaces.
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- GF Mastic Cement (GF 250)—A plastic waterproof cement.
- GF Crystalrox (GF 145)—For hardening and dust-proofing new and old concrete floors.
- GF Cement Accelerator (GF 12)—Quickens setting of cement and prevents freezing of mixture.

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**S**PENCER CLEANING SYSTEMS make possible the high standard of cleanliness demanded in our public buildings.

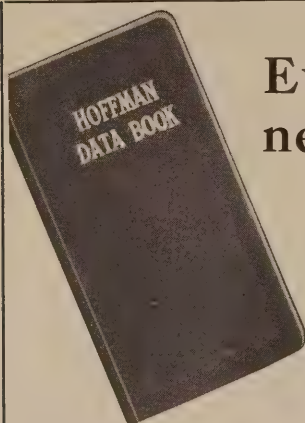
Thoroughly, quietly and speedily the dirt is deposited in the basement and foul air delivered outside the building. Large rooms

are quickly cleaned without the trouble of moving heavy furniture.

Furthermore, both the initial cost and the operating cost are low.

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Hartford, Conn.

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needs this book  
in his files

*An invaluable  
reference book  
on Heating*

**T**HE Hoffman Data Book contains a vast fund of information presented in a simple manner. Just the right size to be convenient, it will prove of daily value to your Specification department.

We will consider it a privilege to send you this book with our compliments if you will write us.

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SNOW-WHITE STEEL





**STYLE A**  
With Plate  
Glass Shelf  
and Towel  
Bar.  
Five Sizes.

## Mirrors of Quality

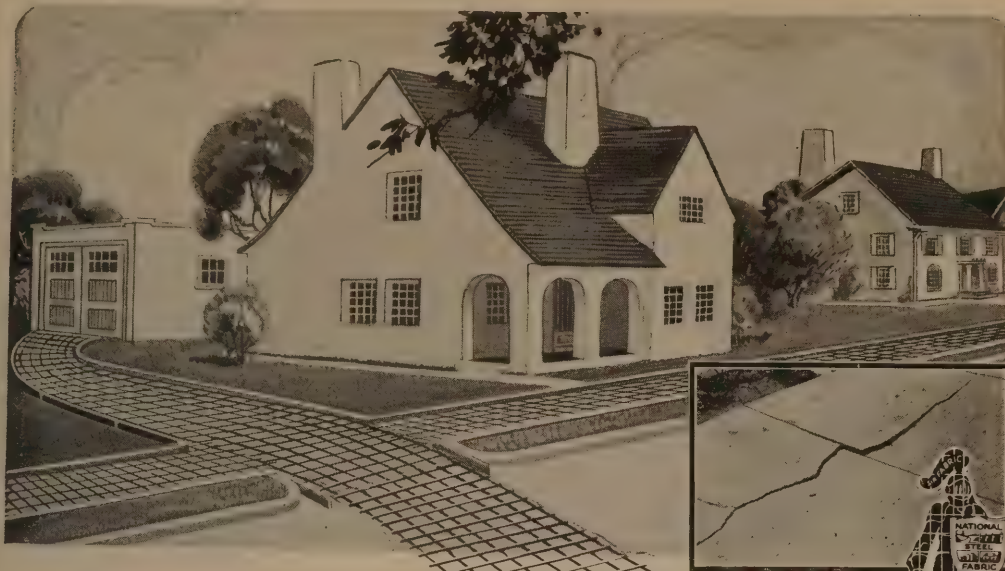
**H**OTELS, Office Buildings, Apartments, and similar buildings will derive a higher tone from the installation of Hess Lavatory Mirrors and Medicine Cabinets. Made of staunch steel, beautifully finished in snow-white baked enamel, these convenient accessories will retain their original beauty for many years. They cannot warp, shrink nor swell. The enamel does not crack nor peel. Doors close quietly.

Write for catalogue; or see Sweet's Index.  
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Makers of Hess Welded Steel Furnaces  
1216 S. Western Avenue, Chicago

# HESS

**CABINETS  
and MIRRORS**  
*Snow-White Steel*





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You design and specify the materials for the home on the basis of good, sound, permanent construction—why not do the same with the sidewalks and driveways around it?

As little as \$5 to \$10 worth of National Steel Fabric embedded in the concrete around the average home will prevent forever the dangerous, unsightly, and expensive cracks and breaks which everyone seems to take as a matter of course—like that shown in the panel at the right. It provides *invisible strength and protection* and assures permanent crack-free construction.

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(Subsidiary of Pittsburgh Steel Co.)

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OFFICES: Atlanta, Boston, Chicago, Cleveland, Denver, Detroit, Houston, Los Angeles, New York City, Philadelphia, Pittsburgh, Rochester, St. Louis, San Antonio, San Francisco

STOCKS: Chicago, Houston, Los Angeles, New York, Cleveland, Pittsburgh, San Francisco, Detroit

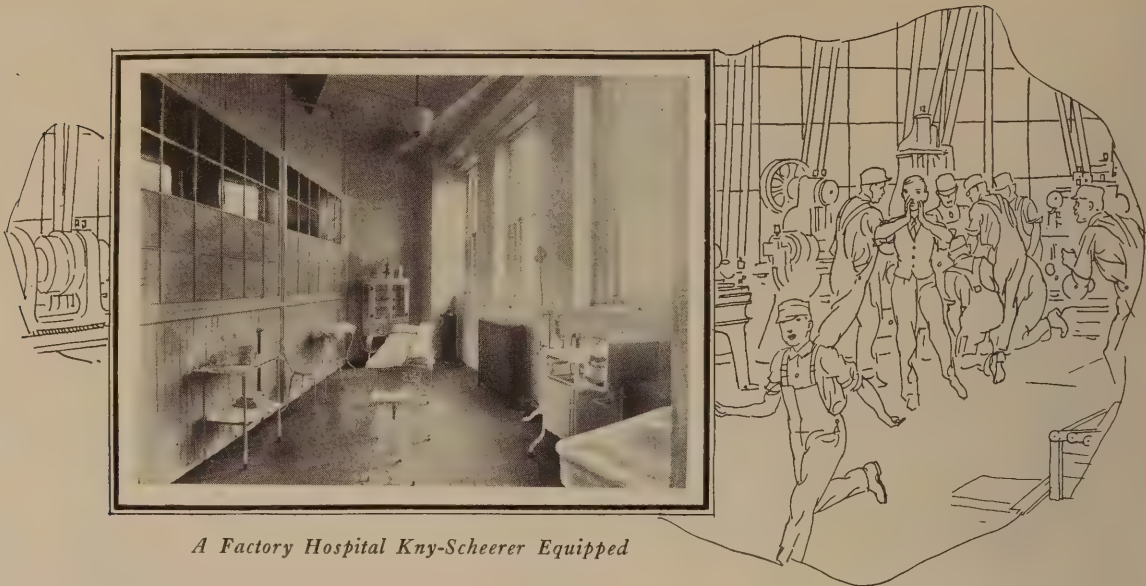
*Use National Steel Fabric for Invisible Strength*

# NATIONAL STEEL CO.

FABRIC

WORLD'S LARGEST MANUFACTURERS of WELDED STEEL FABRIC





*A Factory Hospital Kny-Scheerer Equipped*

*Provision for emergencies  
inspires confidence*

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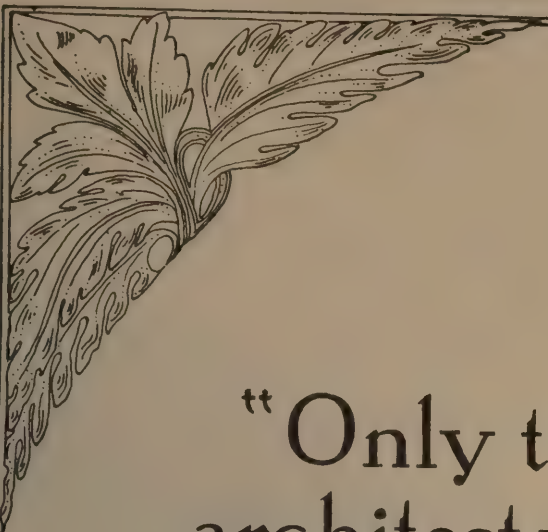
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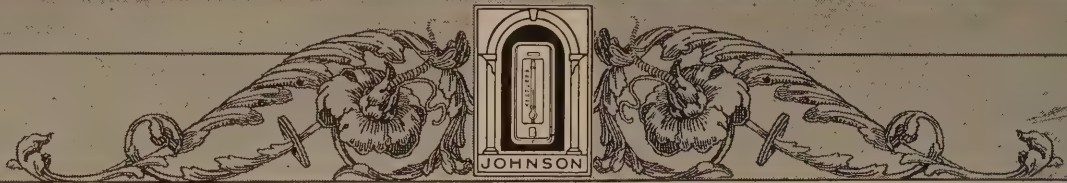
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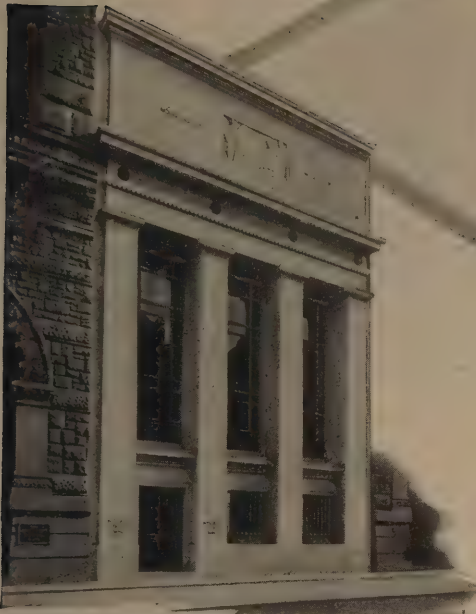
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*Integrity Trust Company, Philadelphia, Pa., Paul P. Cret, Philadelphia, Pa., Architect. Thomas F. McGowan, Philadelphia, Pa., heating and plumbing contractor.*



*Fig. 141, screwed, Standard Iron Body Globe Valve with yoke and composition mountings.*



*Fig. 352, screwed, Standard Bronze Horizontal Swing Check Valve.*

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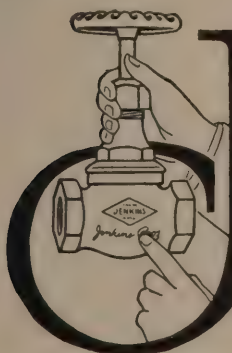


*Fig. 168, Jenkins Radiator Angle Valve, with wood wheel and male union.*

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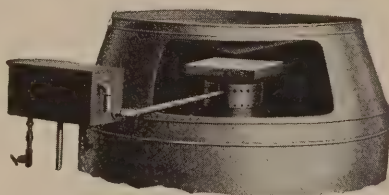
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Length: 466 feet.  
Height: 16 stories.  
Floor space: 1,500,000 feet. Exhibit spaces: 600. Total area of floor space: 30 acres. Contains 1½ miles of corridors. The world's largest single structure.

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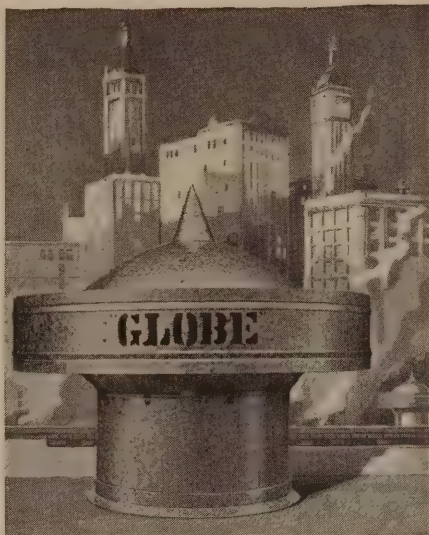
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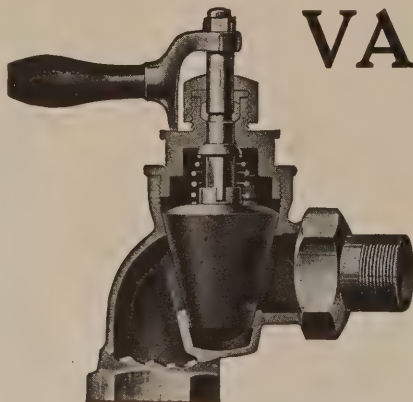
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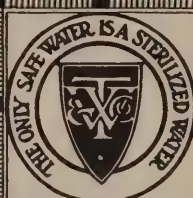
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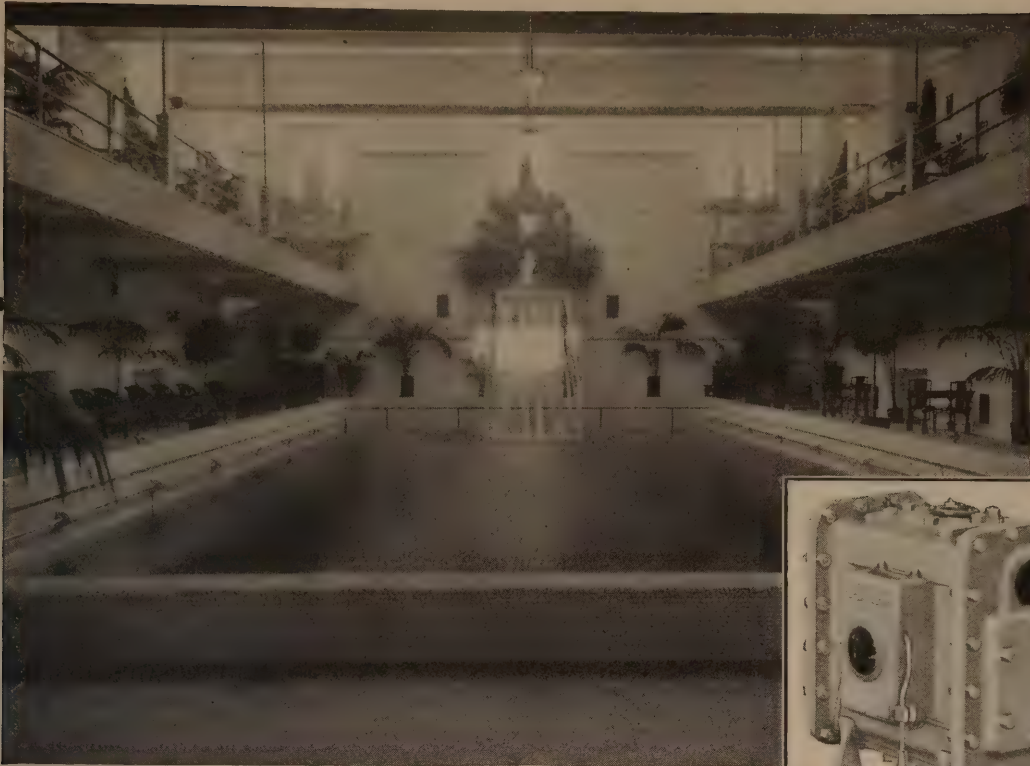
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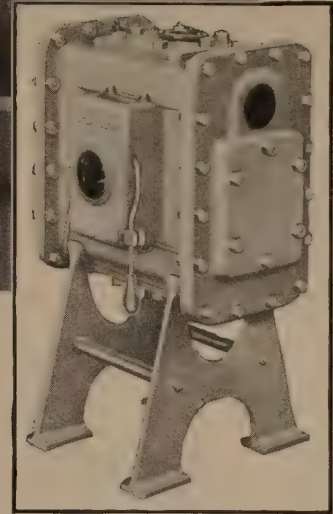
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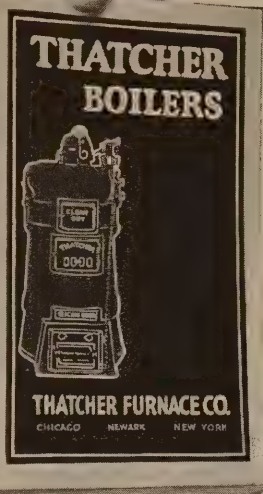
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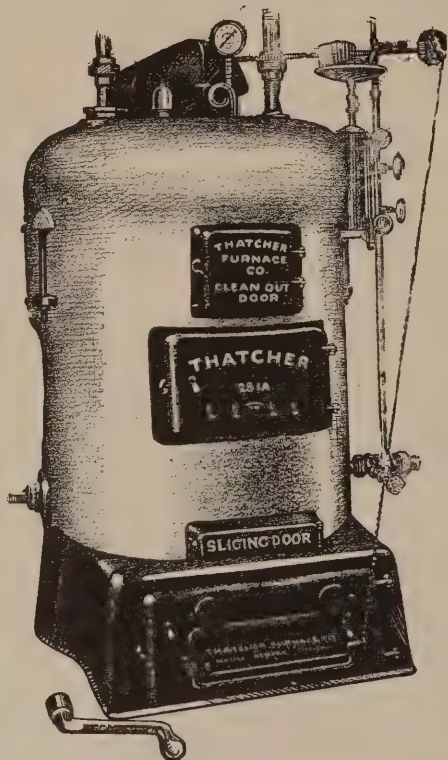
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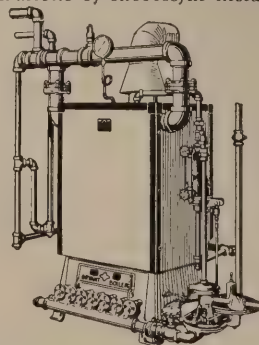


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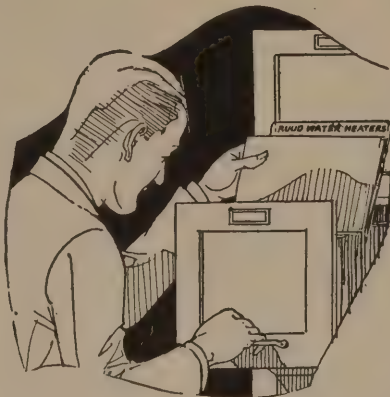


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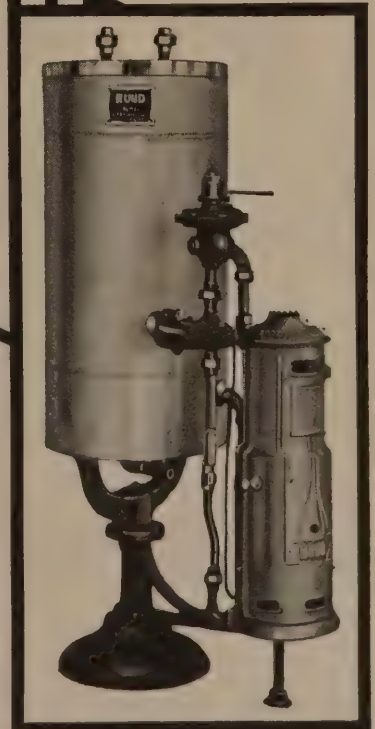
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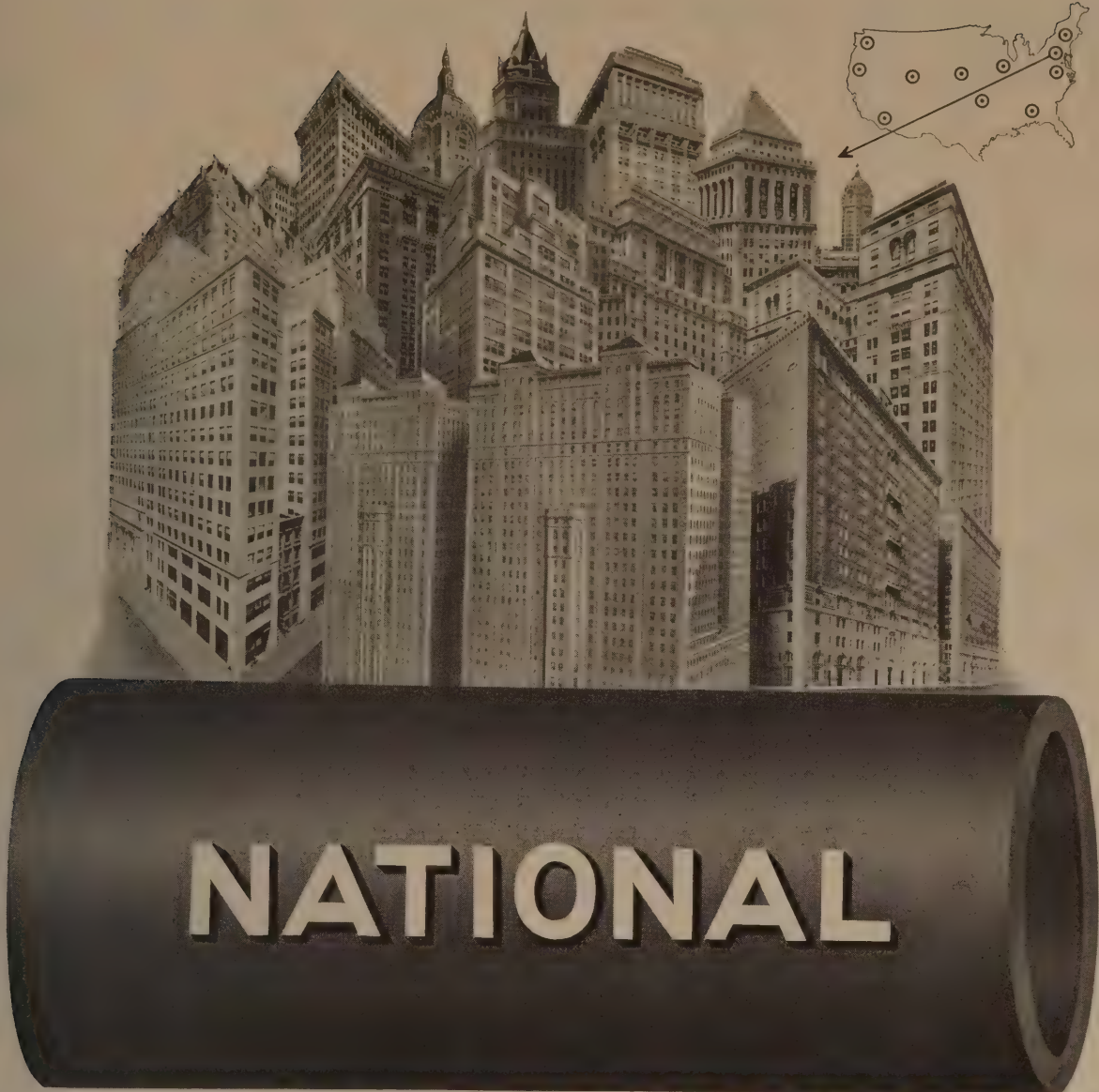
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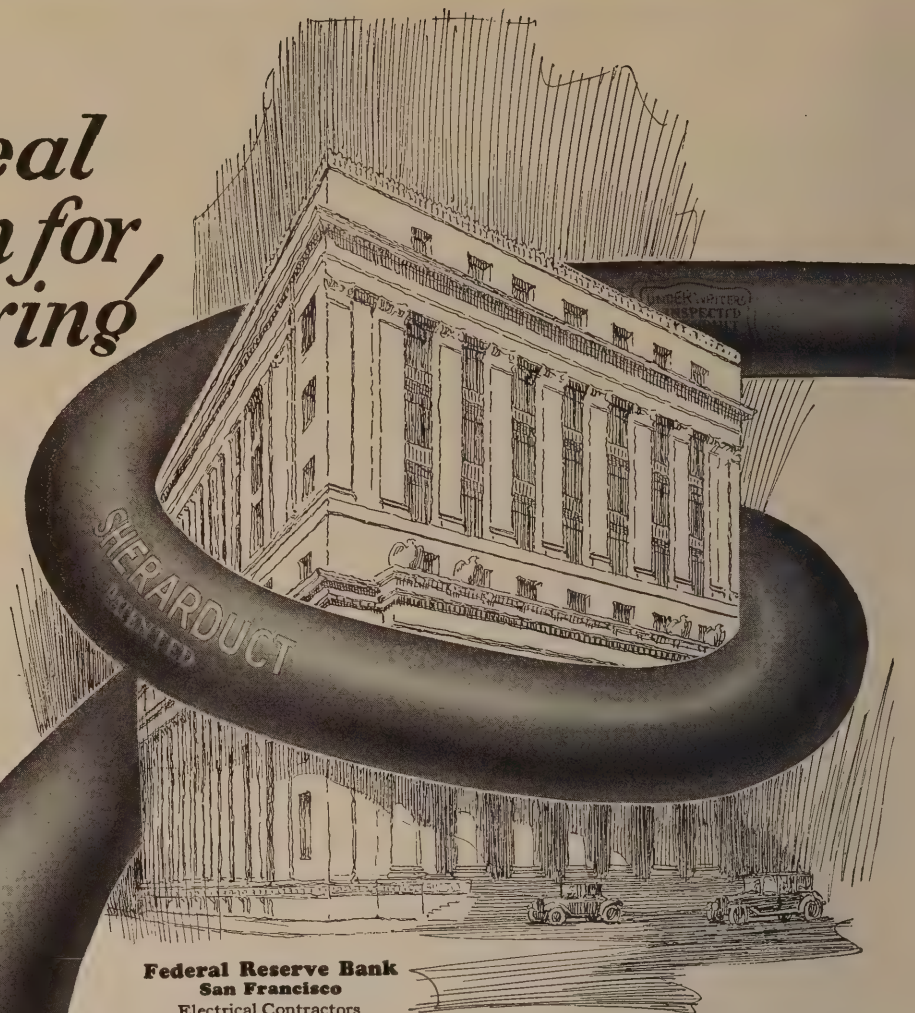
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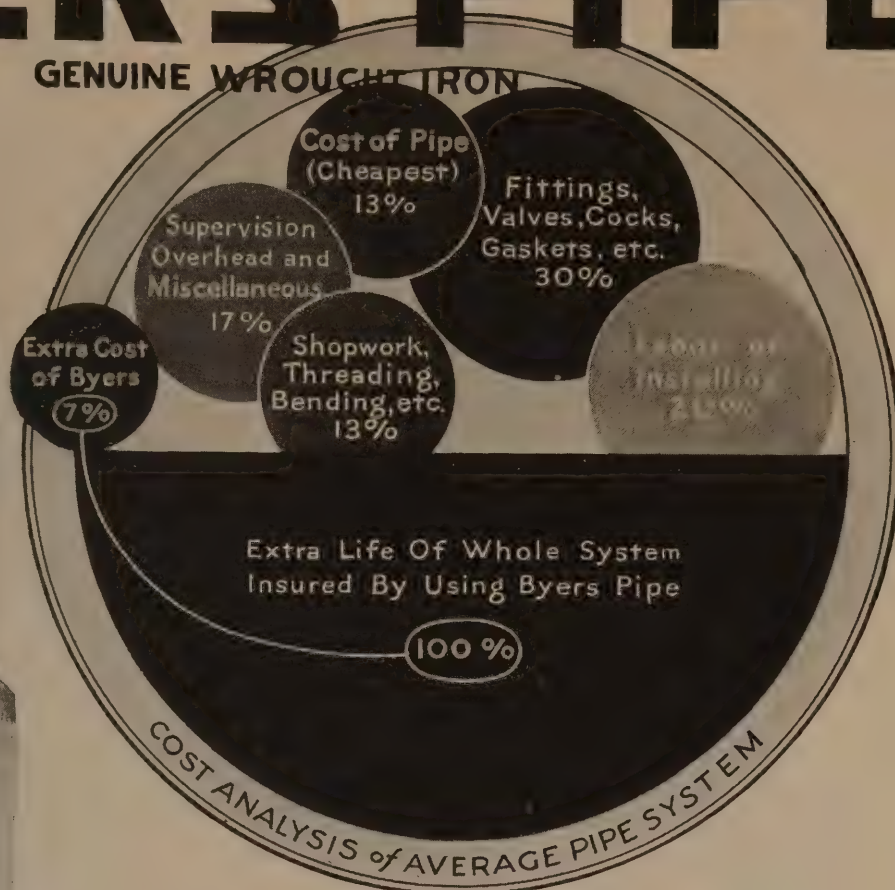
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Byers Bulletin No. 38, "The Installation Cost of Pipe," contains cost analyses of a large variety of pipe systems, showing clearly the relation of pipe cost to the replacement cost. A copy is yours for the asking.

Byers Pipe was originally installed in the old buildings shown here; namely, the Masonic Temple (top picture) and the Tacoma Buildings, Chicago; the Iroquois Hotel, Buffalo; the Callahan Bank Building and First Presbyterian Church, Dayton, Ohio; the Illinois State Hospital, Kankakee (bottom picture); and in hundreds of other notable buildings erected upwards of 30 and 40 years ago.

Its record is one of practically repair-free service. Everywhere it is found apparently in as good condition as when first put in. Its moderate first cost and superior rust-resistance, so amply proven by years of service, have made it the first choice of architects and engineers, for homes, schools, factories, office buildings, and large buildings of every character.

**A. M. BYERS COMPANY, PITTSBURGH, PA.**  
ESTABLISHED 1864

NEW YORK PHILADELPHIA BOSTON CHICAGO HOUSTON  
Distributors in All Jobbing Centers

*Look for the Name and Year rolled in every length.*





*The Woolworth Building,  
New York. Cass Gilbert,  
Architect.*

## CHASE BRASS PIPE

Trade  
CHASE  
Mark

**T**HE tallest building in the world uses  
Chase brass pipe!

The Woolworth Building—the last word in sheer bigness and building achievement—would naturally install the best of everything. Of course, they use brass pipe. By so doing the expense of the “three Rs”—Rust, Repairs, Replacements—is eliminated.

In this and many other big installations architects and contractors have crossed plumbing troubles off their list of worries. They know that Chase brass pipe is trade-marked and guaranteed.

## CHASE METAL WORKS

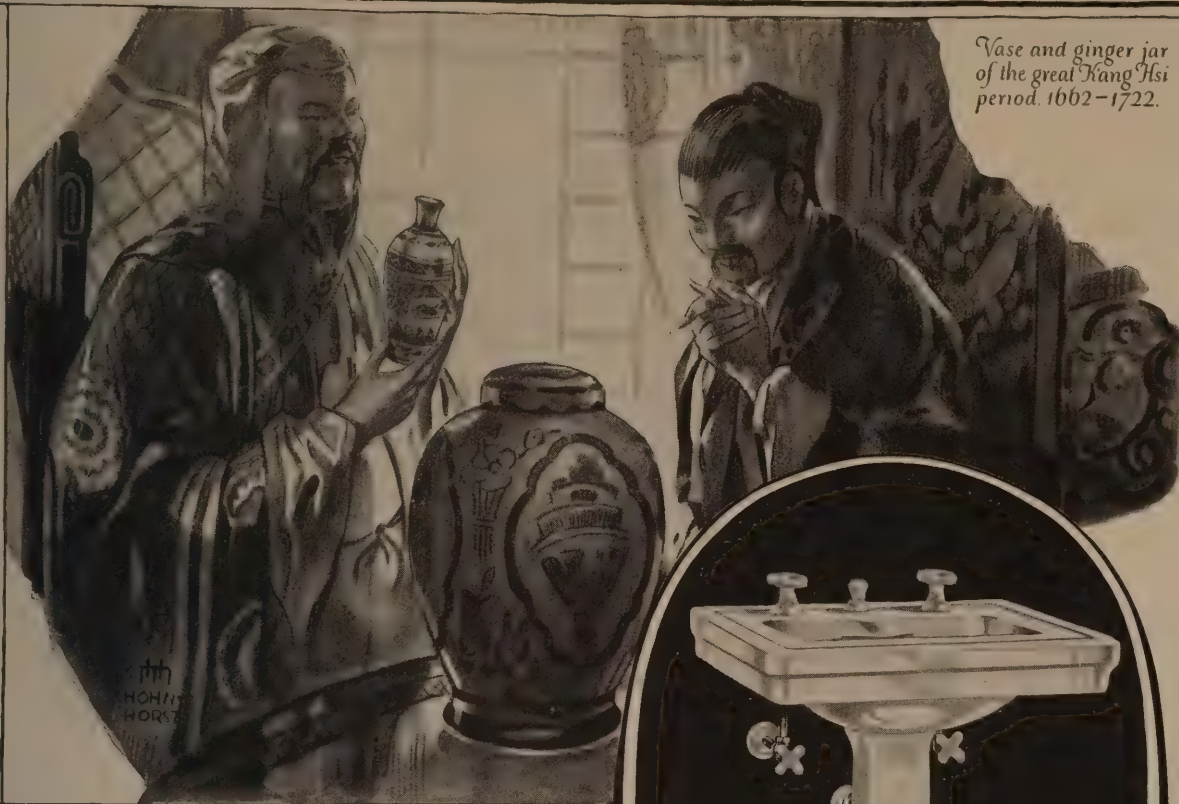
Division of Chase Companies Inc.

WATERBURY CONNECTICUT

CHASE METAL WORKS PLANTS Trade CHASE Mark CHASE ROLLING MILLS

*Member Copper & Brass Research Association*

# MADDOCK *Sanitary Fixtures*



Vase and ginger jar  
of the great Kang Hsi  
period, 1662-1722.

*"objets d'art"*

THOMAS MADDOCK  
bathroom appointments are in harmonious accord with the home in which every detail of equipment is inconspicuously correct.



*The MADBURY*

K-2000

White Vitreous China Lavatory with Integral Supply Nozzle, Cleansing Overflow Feature, Square Bowl, Anti-splash Rim and Square Pedestal. The fittings on the top of the Lavatory are entirely covered with china trimmings. This lavatory is made in the following sizes—

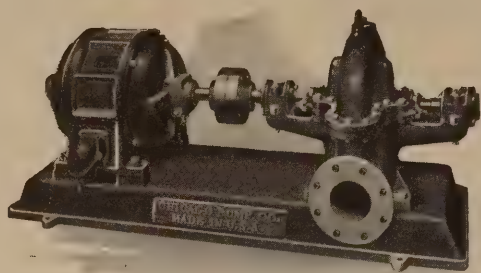
20 x 24      22 x 27      24 x 30

Our new cloth-bound catalogue contains illustrations, descriptions, specifications and roughing sheets of MADDOCK vitreous china sanitary fixtures. In requesting a copy, please use your business letterhead.



THOMAS MADDOCK'S SONS COMPANY  
*Trenton, New Jersey.*





H. S. Pump, connected to motor  
Ask for Bulletin 60

## Pumps like this are installed in:

Straus Building, Chicago  
Graham, Anderson, Probst and White, Architects

Allerton Club, Chicago  
Murgatroyd and Ogden, Architects

London Guarantee Bldg., Chicago  
A. S. Alschuler, Architect

# MICHIGAN BOULEVARD LINK

## CHICAGO, ILLINOIS

Michigan Boulevard, Chicago, portends to be the finest street in the world. Along it are being erected splendid examples of architectural art and engineering genius.

In most of these buildings will be found the highest grade materials and equipment that it is possible to obtain. We are proud to say that "Chicago" Pumps have been considered favorably in every case and have been purchased for fully 90% of the more important installations. The three listed above are typical.

*Write for details*

*Literature and information gladly furnished*

**CHICAGO PUMP COMPANY**

**2316 Wolfram Street, Chicago, Illinois**

# WEI STEEL

TRADE MARK  
REGISTERED

## Compartments

**S**TANDARDIZED units for toilets, showers and dressing rooms. They are made of heavy, copper-bearing furniture steel. The cost is low. They last as long as the building.

SEND FOR COMPLETE  
NEW CATALOGUE No. 11

**HENRY WEIS MANUFACTURING CO.**

FACTORY AND GENERAL SALES OFFICE  
ATCHISON, KANSAS

# HOT



# BURNS NO FUEL

# WATER

## Dependability

In specifying a domestic hot water heater, it is of first importance that it give lasting satisfaction; that it function as perfectly the fifth year as the fifth month.

# EXCEL SO

It is not enough that Excelso uses the heat of the boiler or furnace to fill all domestic hot water needs; it is not enough that there is no fuel cost. These features alone do not sell Excelso; they alone do not lead architects to specify it. It is because of Excelso's invariable dependability of performance; its sturdy, compact construction, and ground brass joints which insure faithful service year in and year out. *This* is the reason for the over 150,000 in use.

*Send for booklet giving specifications*

**Excelso Specialty Works, Inc.**  
365 Excelso Bldg., Buffalo, N. Y.

# Have You the Courage of Your Convictions?

98% of the Architects and Engineers we have asked express it as their opinion that genuine wrought iron pipe is far superior to steel. In the great majority of cases their conviction is expressed in their specifications.

Yet many of these same specifications are changed to a product of admittedly shorter life and greater eventual cost. Why?

Those architects and engineers who have the courage of their convictions are fighting this point out with their clients—and proving to them that the slight additional cost of Reading Genuine Wrought Iron Pipe is justified by its long life and absence from replacement and repair expense.

One of a series of  
"Reading" Saturday Evening Post  
advertisements



## READING IRON COMPANY READING, PA.

World's Largest Makers of  
Genuine Wrought Iron Pipe

Boston  
Philadelphia  
Seattle  
Tulsa

Pittsburgh  
Chicago  
New York  
Baltimore

Cincinnati  
Los Angeles  
Houston  
St. Louis



Reading Pipe is installed  
in the Northwestern  
Depot, Chicago, Illinois

Apartment No. 588,  
West End Avenue,  
New York City, where  
Reading Pipe is installed

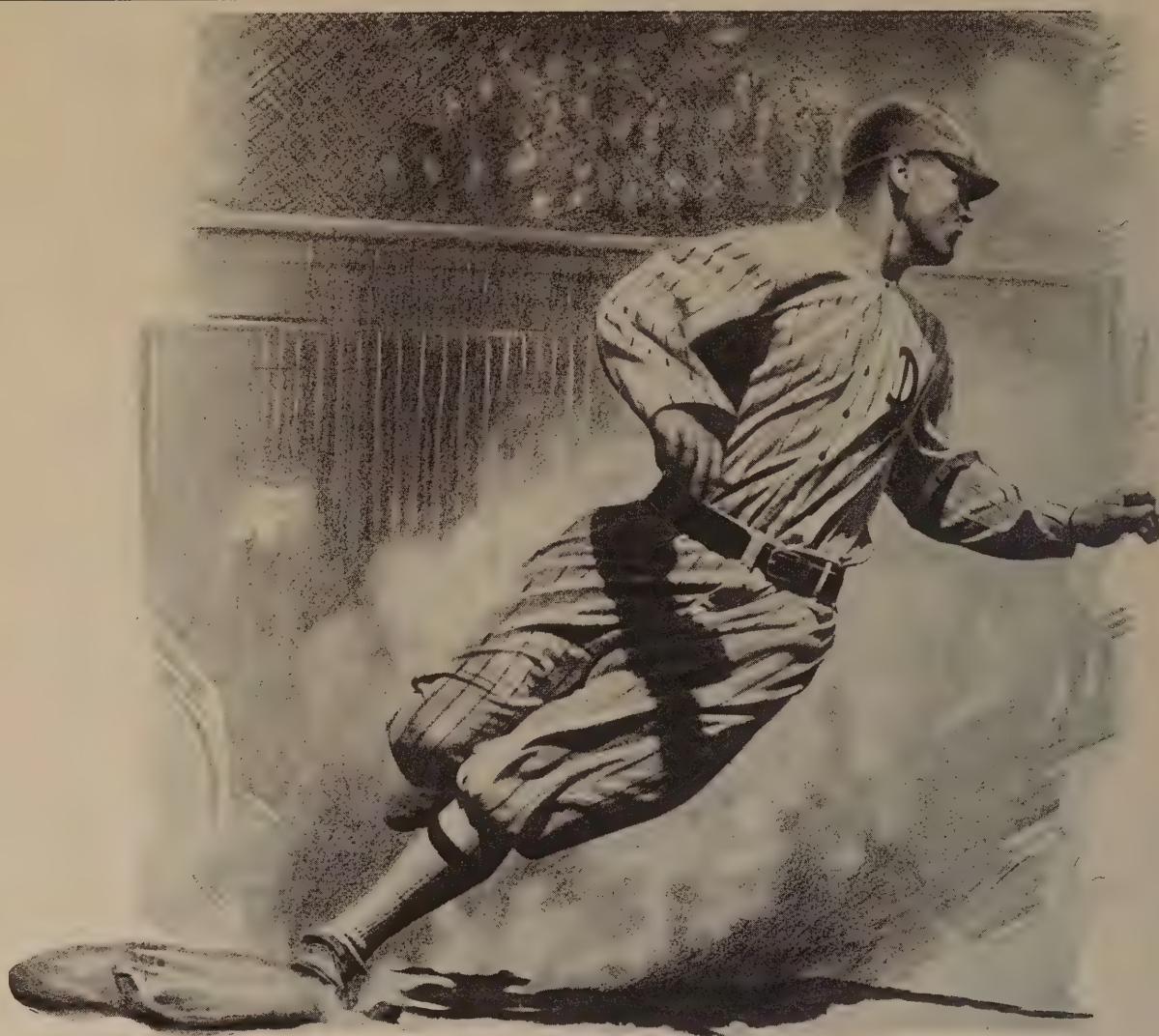
Reading Pipe was specified  
for plumbing and heating  
lines in the Sears-Roebuck  
Philadelphia Building

Reading was used in the  
plumbing and heating  
lines in the Grand Central  
Palace, New York City

# READING PIPE

GENUINE WROUGHT IRON





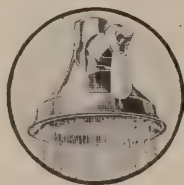
## Behind That Wallop Was The Shower

In baseball, golf, tennis, and other sports, the shower is recognized not just as a bath, but as a means of keeping fit and in health—of refreshing the entire nervous system and relieving fatigue.

The business man, the housewife, as well as the woman with a round of social duties, now all recognize these same advantages and delights of the shower.

This is really why the shower has become so popular. One hardly thinks of building a home without considering a shower. And it's a fact that today the bathroom actually appears incomplete without a shower, either over a tub or in a stall.

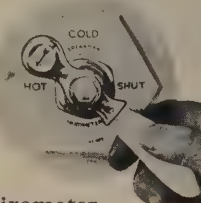
The wide use of the shower by everybody in the house, from the youngest to the eldest, makes the SPEAKMAN Anyforce Head especially appreciated. With it everyone can have just the shower volume desired, while the shower's temperature is being controlled by the Mixometer.



Anyforce Head

**The Anyforce Head is included regularly  
as part of SPEAKMAN Mixometer Showers.**

We'll gladly send architects our shower catalog, either bound or loose-leaf 10 $\frac{5}{8}$  x 8 $\frac{1}{2}$  inches. Showers for all kinds of bathrooms are illustrated and described.



Mixometer

SPEAKMAN COMPANY, Wilmington, Delaware

# SPEAKMAN SHOWERS

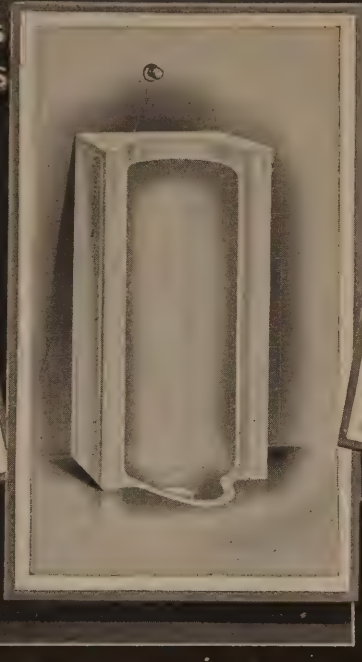
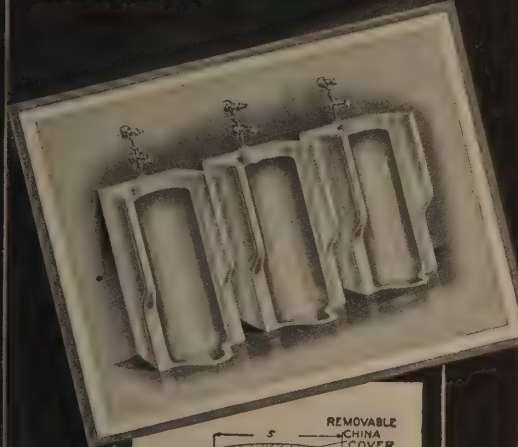
THE MODERN BATH ROOM HAS A SHOWER



Another Douglas

# ACHIEVEMENT IN PLUMBING FIXTURES

The wish of Architects  
and Sanitary Engineers  
realized



The China Cover on outlet gives  
an entire white appearance  
on the inside of Urinal

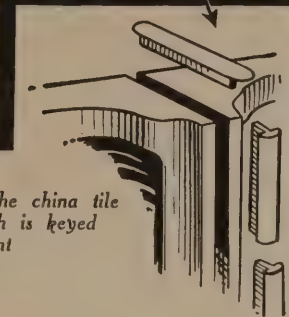


Illustration shows the china tile  
seam cover which is keyed  
in cement

## Genuine Vitreous China Urinals

For a great many years there has been a demand among the Architects and Sanitary Engineers for a material that is absolutely impervious for the manufacture of Stall Urinals. Many materials have been tried and found unsatisfactory for various reasons.

It has always been conceded by authorities that the most desirable material possible for this purpose would be "VITREOUS CHINA" (which is the same material that is used in the manufacture of Water Closet Bowls), but until recently no manufacturer has been able to successfully produce an article as large as a Stall Urinal in "Vitreous China."

THE JOHN DOUGLAS COMPANY has perfected a process to manufacture an 18-inch Vitreous China Stall Urinal, and is now in position to furnish them on specifications.

Points of advantage are: Absolute Imperviousness, Light Weight (about 150 lbs.), Absence of Cracking, Discoloring, etc.

Write for descriptive circular

Manufactured by

## THE JOHN DOUGLAS COMPANY

General Office, CINCINNATI, O.

Factories, CINCINNATI, O., and TRENTON, N. J.







*The PARK LANE, New York: Schultze and Weaver, Architects;  
George A. Fuller Co., Builders; Nason Manufacturing Co., Jobbers;  
John McMillan, Plumber*

# KOHLER

## *And the* PARK LANE

For the Park Lane, one of the most recent and exclusive of the apartment hotels of New York's fashionable Park Avenue section, Kohler "Viceroy" built-in baths were selected. There are two hundred and ninety-five of them in this aristocratic and luxuriously appointed hotel.

Kohler Enameled Plumbing Ware is approved by discriminating architects for its beauty of design and for the quality and uniformly fine color of its enamel. Kohler Ware may be identified by the name "Kohler," unobtrusively fused into the enamel of every fixture.

### KOHLER OF KOHLER

Kohler Co., Founded 1873, Kohler, Wisconsin  
*Shipping Point, Sheboygan, Wisconsin*

BRANCHES IN PRINCIPAL CITIES

MANUFACTURERS OF ENAMELED PLUMBING WARE AND KOHLER AUTOMATIC POWER AND LIGHT 110 VOLT D. C.

# Why the finer new buildings use *Whale-Bone-Ite* Toilet Seats

Their long life makes them an economical investment: most sanitary and easily kept clean

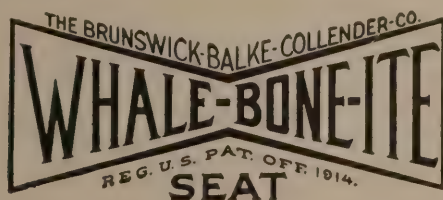
*Whale-Bone-Ite* toilet seats pay for themselves out of the repairs they never have. Fewer seats need replacement, revarnishing and finishing. They never warp or have broken hinges. Lifetime use cannot mar the perfect finish of *Whale-Bone-Ite*. The true economy of these seats is proved only after years of satisfaction, with no repairs, no worry or expense.

FOR an installation of permanent satisfaction, architects, building managers, expert plumbers, today recommend *Whale-Bone-Ite* toilet seats.

Years have proved their superiority in 10 important ways. Each exclusive feature is guaranteed. Insist on *Whale-Bone-Ite* seats for these 10 reasons:

Permanent Durability	Acid-Proof
One-Piece Construction	Non-Inflammable
Non-Warping	Permanent Finish
Sanitary	No Exposed Metal
Easiest Cleaned	Comfortable

*Whale-Bone-Ite* comes in two finishes to match the toilet room fixtures: ebony or mahogany. Leading plumbers and jobbers supply *Whale-Bone-Ite*. Refuse imitations.



This striking new building of the American Radiator Co., on 40th Street, facing Bryant Park, New York, is completely equipped with *Whale-Bone-Ite* toilet seats, model 21-96, in ebony. The building is finished in black and gold, with stone facing, and has created considerable comment recently. The architect was Raymond M. Hood.

If your jobber or plumber can't supply you, write direct to *Whale-Bone-Ite* Division

THE BRUNSWICK-BALKE-COLLENDER CO., 623 South Wabash Avenue • CHICAGO



# Manufacturers' Catalogs

**THE MAHOGANY ASSOCIATION, INC., New York.**  
"Historic Mahogany."

Students of furniture find the subject divided broadly into three sections: the age of oak, the age of walnut, and that of mahogany, each being the time during which the wood concerned was being chiefly used or was particularly favored by the world of fashion. The age of mahogany, in which we may be said to be still living today, began toward the close of the sixteenth century when Sir Walter Raleigh introduced the wood into England, and with mahogany are identified all the great furniture makers whose names have survived—men such as Chippendale, Hepplewhite and Sheraton in England, and that most eminent of American furniture makers, Duncan Phyfe of New York.

This little brochure has been published probably to keep before the eyes of architects and decorators the merits and possibilities of mahogany,—if indeed it be necessary to advertise the possibilities and merits of a wood universally popular, the very name of which suggests luxury and beauty. In its pages are contained many facts of interest to the student, and the pages are enlivened by a number of spirited little drawings of details of furniture, such as the pediments frequently used upon large pieces of wall furniture, and the legs and feet of tables and chairs. The booklet should certainly find a place in the library of any architect or student of furniture designing or interior decorating by reason of its valuable data.

**THE DURIRON COMPANY, Dayton.** "Duriron Acid-Proof Building Equipment; Drainage; Ventilation. Bulletin No. 134."

The strength of even most metals and other substances which are supposedly imperishable is not always proof against the insidious attacks of acids and fumes which are derived from various chemicals. Thus experience has proved that cast iron is attacked and eventually destroyed by many acids which are in common use, while steel and wrought iron are generally even less resistant to acid attack than cast iron; brass will not withstand the attacks of such widely used corrosives as nitric, strong sulphuric and muriatic acids and iron chloride, and copper is affected similarly to brass. Substances of other kinds are likewise affected disastrously by acids and fumes. Tile is rapidly disintegrated as soon as its glaze has been eaten away; glass is so easily chipped or cracked that its value is not likely to be great, while other substances, such as fiber, warp from temperature variations, become softened by liquids and sag and leak. And yet buildings of countless sorts, such as chemical plants and laboratories and factories where acids of different kinds are much used, are dependent upon these materials for their drain pipes as well as for the fans, hoods and linings of ducts which are used in ventilating apparatus.

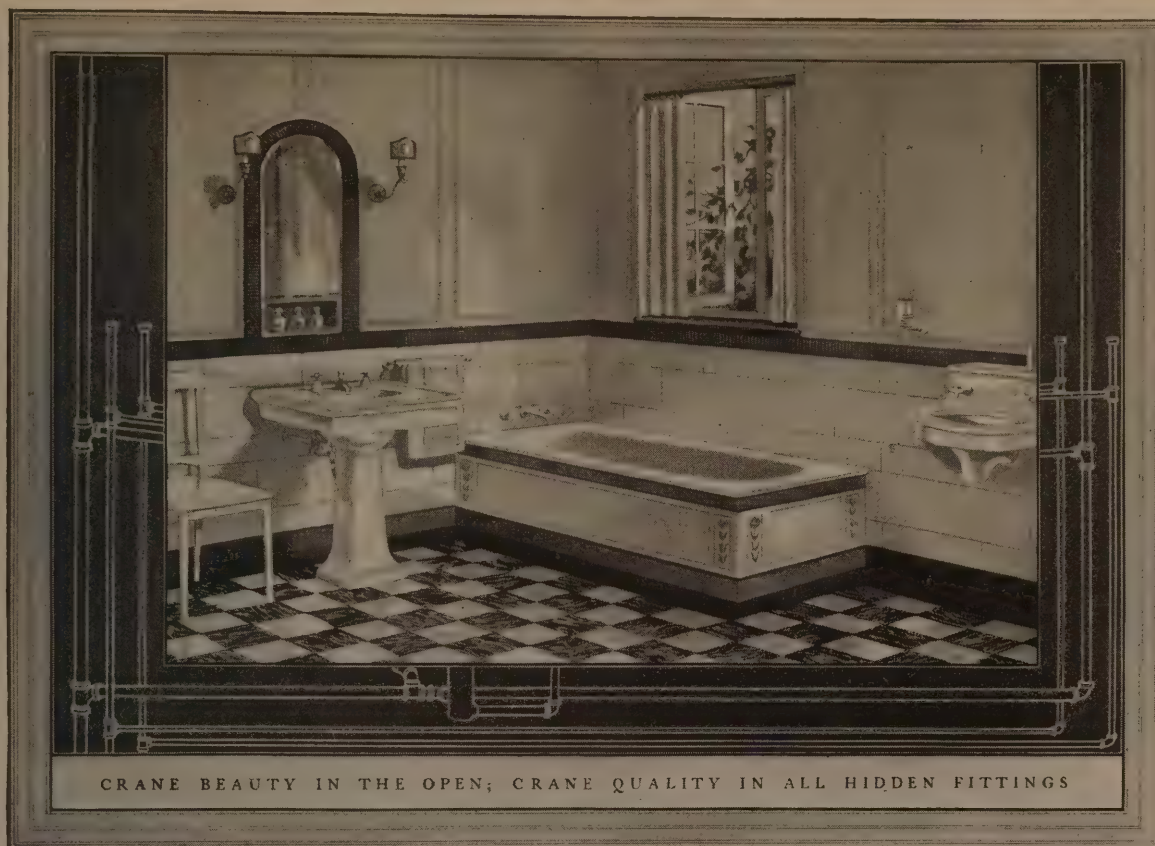
Difficulty of securing a material suitable for uses such as have been described was the cause of the perfecting and introduction of "Duriron," a metal which will withstand these conditions. Research scientists carefully analyzed and studied the requirements and succeeded in producing an alloy of iron which is entirely resistant to the action of commercial corrosives. Being a homogeneous metal it requires no protective coating and it is equally immune from attack inside, outside and all through its structure. The manufacturers' statement gives its constituents as silicon, carbon, manganese, sulphur and phosphorus.

This brochure or booklet, in addition to giving all possible data regarding "Duriron," catalogs the sizes of pipes, the different pieces used with piping such as hubs, bells and flanges, spigots, reducers, increasers and other details, together with the fans, impellers and other parts which have to do with ventilation. The brochure lists the names of a large number of architects who have specified "Duriron," and gives another list of important structures in different parts of the country in which it is used.

**WESTERN ELECTRIC COMPANY, "The Lighting Manual."**

Probably the necessity of instructing properly the large number of young architects and specification writers which each year finds at work is one reason for the publication of this brochure which should be on file in the office of every architect, builder or contractor. The use of electricity for lighting is of course now universal, and with its widespread use there comes the necessity of being fully informed regarding the wiring systems by means of which the electrical current is transmitted from its source to the lighting fixtures and regarding the lighting fixtures themselves by which the light is distributed. One of these subjects of course has to do with the best and most economical method of bringing current into a building, while the other covers its most economical consumption, and both are important, since it would be easy to fall into error by making a wiring system too small or too large for the work it must do, the result being insufficient lighting or waste of materials, or by using fixtures too large, so that they consume an unnecessary amount of current.

In this valuable brochure, therefore, the entire subject is covered fully and yet within brief compass. Explanations are given of various kinds of lighting systems, such as direct lighting, semi-indirect or totally indirect, and reasons are given for one type's being best adapted for use in a certain place. Directions are given for the correct installation of each type and regarding the kind of lighting fixtures which belong to each. The brochure also gives an endless quantity of valuable data regarding lamps, reflectors, diffusers and other details of equipment.



### A "TARNIA" BATH FOR THE AVERAGE POCKETBOOK

The average man covets the beauty and convenience of the *Tarnia* bath that is finding such enthusiastic acceptance in so many homes.

There is room in the estimates of even modest homes or apartments which you may be designing, for the *Tarnia* bath shown above.

Sanitary and economical Vitrolite and similar

materials will replace expensive tiling on its sides. It may be set in any position. In a right or left corner or an alcove, it requires no more space than an ordinary tub.

Home builders will welcome your suggesting it. Apartment or hotel owners will foresee increased revenue. And CRANE in specification signifies dependable quality to all.

# CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO  
CRANE LIMITED: CRANE BUILDING, 386 BEAVER HALL SQUARE, MONTREAL

*Branches and Sales Offices in One Hundred and Forty-five Cities*

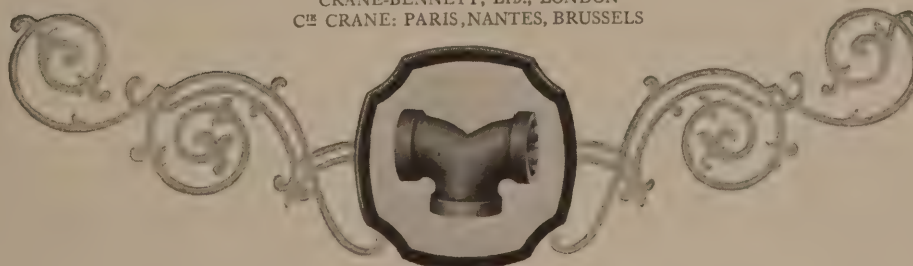
*National Exhibit Rooms: Chicago, New York, Atlantic City, San Francisco and Montreal*

*Works: Chicago, Bridgeport, Birmingham, Chattanooga, Trenton and Montreal*

CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO

CRANE-BENNETT, LTD., LONDON

C<sup>IE</sup> CRANE: PARIS, NANTES, BRUSSELS



*Crane double branch elbow*



# Manufacturers' Catalogs

**PRATT & LAMBERT, INC.,** New York; Buffalo; Chicago; Bridgeburg, Ont. "The Specification Manual."

Manufacturers of many kinds of material which enter into building discovered long ago that their efforts in supplying excellent materials often failed to give satisfaction to the owners of the buildings owing to their being improperly used. In the use of certain materials there is a great difference in various parts of the country and with different classes of workmen, and in few departments of building are there wider differences in matters of practice than in the use of paints, enamels, varnishes and the other varieties of what are broadly known as "painting materials."

To acquaint architects with the proper methods of using the many materials which the firm produces, Pratt & Lambert, Inc., are issuing a Specification Manual which describes the proper use of each. The 40-page book represents careful preparation, involving research and practical finishing experience gained in the manufacture and use of varnishes, enamels and kindred products covering a period of more than 75 years. It supplants all previous Pratt & Lambert specification books and contains, in addition to detailed specifications, some timely and readily available information on finishing interior and exterior surfaces. The facts in the manual, their presentation and arrangement, are the result of considerable thought, bearing uppermost in mind the convenience and preference of the specification writer and the architect. Several pages of the brochure are devoted to listing the many Pratt & Lambert products, giving a description of each.

**INTERNATIONAL CASEMENT CO.,** Jamestown, N. Y. "International Casements." Arguments for Wider Use.

Has the demand for casement windows brought about their present development, or has the high standard of excellence which they have reached been the cause of their being more widely used? This type of window belongs to architecture of almost every form used upon the Continent and was employed universally in England until the time during the seventeenth century when the importation of new fashions from Holland brought the "double-hung" or guillotine window. The use of casements in America has of course been furthered by the improvements which have been made to them. The modern casement is of steel and of scientific strength and accuracy, possessing members which considerably strengthen the sash frame and act as a baffle against the wind and rain in the most exposed positions. It is accurately fitted, secure and weather-proof, and the casement form of window offers several advantages which are so well known by architects that they need not be enumerated here.

This publication might be described as a complete catalog to the use of "International Casements" and also an illustrated argument for their

more extended use. There is given every possible detail of data which architect or builder could desire concerning material, construction, glazing and hardware, together with drawings of casements and their various parts, and drawn details as well of sills, jambs, mullions, and the other parts of a building with which casements come into contact. But what will particularly interest a designer is a collection of illustrations from photographs of exterior and interior views of windows of countless old English houses together with detailed drawings of their casement windows. Among the illustrations are many from such well known houses as Owlpen Manor, Upper Swell Manor, Westwood, Penshurst Place, West Burton Manor, Compton Wynyates, Great Dixter and many more old places of different English periods. The volume also includes illustrations and details of many examples of modern American work by well known architects.

**THE C. A. DUNHAM CO.,** 230 East Ohio Street, Chicago. "Excessive Fuel Consumption." How to Avoid It.

There may be a large difference between the cost of a heating system properly installed and economically operated and the same system carelessly equipped and managed, even though there is no difference in the amount of comfort which the system affords to occupants of the house. When the cost of heating a building is excessive, the trouble may be due to some small defect in the installation or to some error in the grading of some parts of the piping system. There are instances where some few radiators upon a system remain cold until they are heated by forcing the system to a high temperature when the difficulty could be quickly remedied at small expense by making slight changes in the pipes which serve these radiators. In other instances excessive cost of operating a heating system is due to not keeping the boiler and piping system clean, oil and dirt being brought into the boiler with the return water.

This "folder" or "leaflet," issued by a concern which has made a particular and successful study of heating in its different aspects, is so filled with useful information that it should be had not only by architects, engineers and builders but by everyone who is in any way interested in heating plants.

**VAN RENSSELAER P. SAXE, C.E.**

*Consulting Engineer*

**STRUCTURAL STEEL  
CONCRETE CONSTRUCTION**

**Knickerbocker Building**

**Baltimore**



Architects  
TROST & TROST  
El Paso, Texas

THE EL PASO HIGH SCHOOL, EL PASO, TEXAS

Plumber  
L. B. McCHESNEY  
El Paso, Texas



BETHEL TOWNSHIP CENTRALIZED SCHOOL, MIAMI CO., OHIO  
Architect  
WALKER & NORWICH  
Dayton, Ohio

Plumbing Contractors  
STEPHENSON & CO.  
Piqua, Ohio

SEVEN thousand modern school buildings have installed "Clow throughout." This testimony is valuable because

1. The school buildings of this country are among its finest examples of architectural taste. Quality of design and workmanship is insisted upon.

2. School use is *hard use*. Plumbing and plumbing accessories must give continuous good performance with the minimum of repairs and upkeep.

These seven thousand school buildings are seven thousand reasons why *every* school should have "Clow throughout."

JAMES B. CLOW & SONS

*General Offices*

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*Sales offices in principal cities*

CLOW



# Manufacturers' Catalogs and Business Announcements

**AMERICAN CHAIN CO., INC., Bridgeport, Conn. "American Sash Chain." Data on Window Fittings.**

Excepting where use is made of casements, windows are necessarily arranged with "double-hung" or "guillotine" sash, so made that they may be raised, lowered, or held open at any desired point by means of the weights by which they are counter-balanced. These weights, since they must be concealed, are placed within the thickness of the walls, behind the woodwork which forms the window's architrave, and since they can be reached only by removing this woodwork, at considerable inconvenience and cost, it is most desirable that the installation be carefully made in the first place, that the weights be neither too heavy nor too light to serve their purpose, that the pulleys and other mechanism be simple and therefore not likely to get out of order, and that the cords or chains be durable.

Owing to the wide use which architects and builders are making of the sash chains manufactured by the American Chain Co., Inc., it is hardly necessary to enter here upon a description of their advantages, and the purpose of this booklet is probably to keep before those interested particulars regarding the different weights and sizes of these chains and similar details concerning the fittings which go with them. The links of the American Sash Chain are flat which gives the chain a strap-like action as it runs smoothly and freely over a pulley which has the regular sash chain action. There is no possibility of there being a "kink" in the chain which might make it impossible to raise or lower the sash. The company also manufactures a Round Cord-Pulley Chain, designed as the name implies to be operated over the usual round faced pulley, but since it is a chain it cannot stretch, unravel, or rot, nor can it be cut by sharp edges.

Besides listing sizes, thicknesses, finishes and weights of these different kinds of sash chains and the fixtures which are used with them the booklet gives and illustrates an impressive list of well known buildings of every kind in all parts of the country in which the chains supplied by the American Chain Co., Inc., are being successfully used.

**THE RICHARDSON COMPANY, New York, Chicago, Dallas, Atlanta, Cincinnati, New Orleans. "Standard Specifications for Roofing, Waterproofing, Dampproofing and Insulating."**

The value of sheet roofing of any kind depends upon two things: (1) a pliant, durable, adhesive waterproofing bitumen, which shall be free from destructive chemical elements and entirely impervious to water; (2) a felt foundation which in spite of severe weathering will permanently hold this bitumen fast to the roof. It is much easier for the layman or even for many architects and builders to understand the importance and nature of the felt than the properties of the bitumen, the function of

which is to saturate the felt. In the past hardly enough effort was made to develop this vitally important waterproofing agent, the bitumen, and the Richardson Research Laboratories worked and experimented for years in order to obtain a material which would be free from the defects which characterized the earlier materials used for this purpose, the result being "Viskalt," a blend of waterproofing bitumen said to be more efficient than anything which has ever been devised. This bitumen is used upon felt which possesses four different requirements, each dependent upon the other; they are (a) proper absorptive capacity; (b) tensile strength, (c) flexibility, and (d) uniformity, and proper weight and thickness are secondary to these principal requirements. All of these requirements are important.

Closely allied to efficient roofing are the subjects of Waterproofing, Dampproofing, and Insulating, and this valuable brochure deals with all these topics, giving directions or specifications for the use of Richardson materials which, if properly used, will secure the results desired. Just as the materials themselves are the outcome of years of experiment, the specifications are the result of thorough research work by the best chemists and roofing experts.

## ANNOUNCEMENTS

The executive offices of the Illinois Society of Architects have been removed to 160 North La Salle Street, Chicago.

The new office of Harvey Dakin, Architect, is at 413 Thatcher Building, Pueblo, Col., and not Syracuse, N. Y., as was announced in a recent issue of THE FORUM.

Herman R. Kaplan has opened an office for the practice of architecture at 1628 Æolian Hall, New York. Manufacturers' catalogs and samples would be appreciated.

The firm of Bellows & Aldrich having been dissolved, Robert P. Bellows will continue the practice of architecture at 8 Beacon Street, Boston. George W. Gilmore will be associated with Mr. Bellows.

William T. Aldrich, formerly of the firm of Bellows & Aldrich, has opened offices at 30 Newbury Street, Boston. Associated with him are James A. Holt and Stanley B. Parker.

Nichols & Sheppard, Architects, have admitted to partnership George Y. Masson, and the firm will now be known as Nichols, Sheppard & Masson, with offices in the Dowler Building, Windsor, Ontario.

H. Wanetick, a civil engineer, formerly of Pittsburgh, is now in Palestine engaging in building construction and would be glad to receive the catalogs and samples of manufacturers. Mr. Wanetick is to be addressed care District Engineer, Jerusalem.

# Can an architect be *too* fair to manufacturers?

**D**OES not an architect sometimes defeat the best interests of his client by writing the names of competing products into his specifications?

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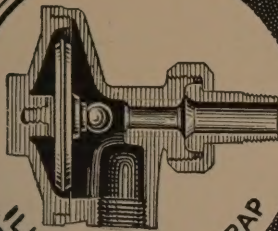
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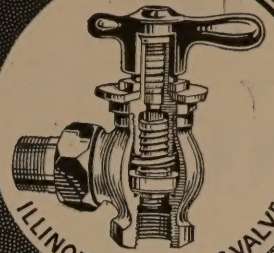
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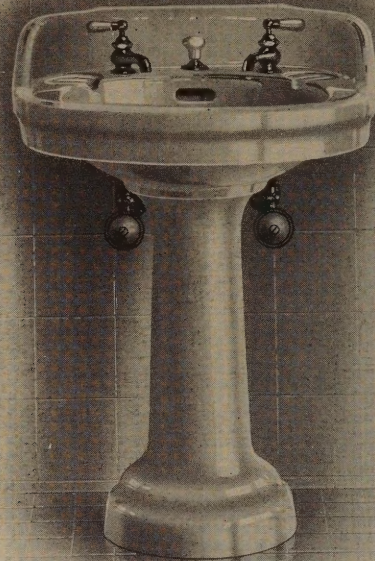
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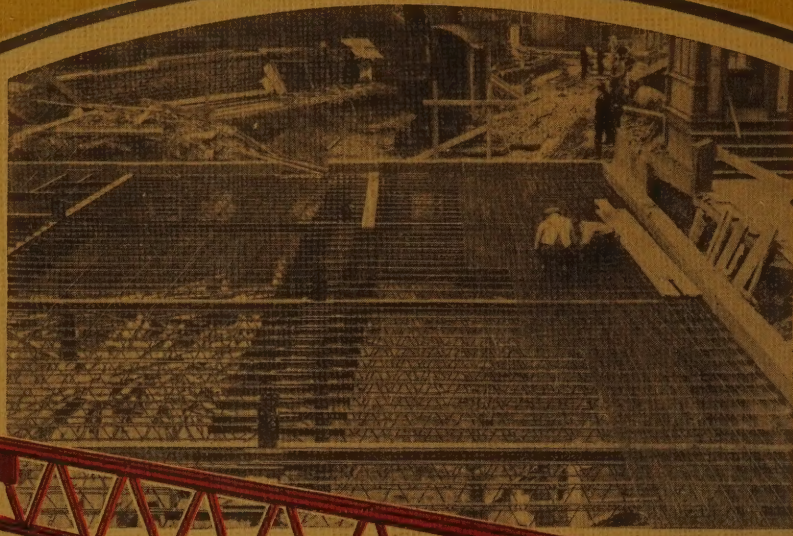


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